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DID CLINICAL SPECIALIZATION ANTICIPATE SCIENTIFIC MEDICINE?*

THE ANNUAL ORATION

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The title of this paper, "Did Clinical Specialization Anticipate Scientific Medicine?" was formulated with the thought in mind that it would be a simple task to show that human beings have been quick to reach conclusions and have often succeeded in naming their specialty, classifying it, and having themselves accepted in the literature before there was unfolded scientific data sufficiently accurate to justify such designation! This is true if one desires to be entirely technical as to classified knowledge.

History records that in the older civilizations which had merit, medical labors were considerably divided. You are familiar with the early history of the Egyptian physicians (before Christ) who were committed to specialization. They carried specialization into their practice to such an extent that the body as a whole was completely lost sight of. Many of the modern papers dealing with the early history of medicine refer to physicians of ancient Greece, who, according to Socrates, were "ignorant of the whole, which ought to be studied also, for the part can never be well unless the whole is well."

However, what I may say must not be interpreted as a failure to answer the question, until modern medicine, and what we concede makes it scientific, has been taken into consideration.

*Read before the fifty-ninth annual meeting of the Louisiana State Medical Society, May 3, 1938, at New Orleans.

The inventive genius of man, over a long period of time, has here and there developed special instruments for special service, which opened wide the way for further development of the extensive knowledge which came about in the many fields of medicine. Much of this came from the enthusiasm of so-called specialists.

Scientific knowledge which we possess is the result of accumulated mental effort of many men, which has been correlated to make a fairly complete pattern. Individual accomplishment, although frequently small in itself, has been stimulating; finally, constituting a factor of really great value when interrelated by minds, broader, better and capable of harmonizing the contributions from all sources into classified knowledge. This statement seemingly would apply to the lowliest personal effort, as well as to the magnificent accomplishment of the vast field of workers as they search for the truth, utilizing all knowledge for this purpose.

Adverting to the inventive genius of man, we may refer to the microscope, invented by the Janssens in 1590. It was used early in the seventeenth century by the Jesuit priest, Kircher, for studying disease, and by Swammerdam before he studied medicine for the purpose of dissection. You will recall, however, it was Leeuwenhoek, a draper and city hall janitor, who, in 1674, used his own microscope and lens to describe the spermatozoa; who gave the first complete account of the red blood corpuscles and discovered the structure of the crystalline lens.

Leeuwenhoek also demonstrated the capillary anastomosis between the arteries and veins, which Malpighi had already seen in 1660 without attaching great importance thereto. Mal-

pighi's discovery and Leeuwenhoek's thorough work on the capillary circulation finally completed William Harvey's earlier demonstration. Further scientific contribution was made by Leeuwenhoek in papers sent to the Royal Society and French Academy of Sciences. Had he been a physician, understanding the ethics of medicine and imbued with true professional idealism, in all probability his work in microscopy would have been accepted. A different emphasis would have been placed upon the results of his labors, and almost two centuries would have been gained in developing the general use of an instrument, which eventually helped create new specialties in medicine.

Malpighi, contemporary of Leeuwenhoek, is seemingly credited with being the father of histology; the term "histologist," however, did not appear in English literature until 1859. We all know there was a vast hiatus in time in the correct interpretation of the microscopic world, which was partially observed by these men, but which required the passing of a century or two before such observations could be classified as a specialty in medicine.

Von Gleichen first stained bacteria in 1778 but this art was not quickly developed. It was left to Koch and others to develop staining processes and discoveries which finally justified the specialty of bacteriology.

Weir Mitchell relates that Galileo in 1557, invented a rude thermometer or thermoscope and as early as 1600 Kepler used pulse counting to time his astronomic observations. Laennec invented the stethoscope in 1819. The first thermometers to appear in the English hospitals about 1867 were large and slow to register. They came into general use largely through the effort of Wunderlich, whose treatise on the relations of animal heat in disease brought clinical thermometry to the fore. Medical men were then able to differentiate the sounds of the human organs with the stethoscope as well as determine the temperature of the body in a scientific manner. The foregoing justified the appearance of the term "clinician" in 1875.

In 1849, James Marion Sims invented the vaginal speculum. Failure to bring relief to patients with vesicovaginal fistula had for years been a great stumbling block in this field of practice. Sims had done operative work among the negro women of Alabama with astonishingly good results. One day he was called to see a country woman who had sustained a displacement of the uterus from a fall from a horse. In making a digital examination to correct the displacement, the surgeon hit upon the peculiar lateral posture (now known as Sims' position) and invented the special curved speculum, which were the two factors underlying his success in operating for vesicovaginal fistula. This gifted surgeon made it possible for the specialty of gynecology to find its place in the literature in 1872.

The astronomists and physicists played an important part in the early development of the physical theory of vision, with their observations of the retina, and the part the lens plays in refraction. Mariotte proved that a luminous eye is due to reflection of light. He also discovered the blind spot in the retina. The term "ophthalmist" appeared in the literature in 1696; "ophthalmologist," in 1834. This specialty in medicine was not on a sound basis, however, until the invention of the ophthalmoscope by Helmholtz in 1851, with which one could see the background of the eye. Physicians listed as ophthalmologists after 1851 had something which gave their clinical observations a degree of exactness, all of which brought about classified knowledge and definitely determined a special field of medicine.

The term "bronchotomist" was used in the English language as early as 1670; the term "aurist" appeared in 1678; "rhinologist," 1838. The laryngoscope, invented in 1855 by Manuel Garcia, was evidently first used by the aurist and rhinologist, although the term "laryngologist" did not reach the literature until 1871.

Pasteur's contribution during approximately this same period is well known. To the great Englishman, Lister, belongs the credit for antiseptic surgery, which was the outgrowth of Pasteur's contribution and Lister's method of preventing sepsis. The term "surgeon" appeared in the English literature in 1338, but not until Lister's day was the idea of laudable pus dispelled. Antiseptic surgery had its limitations, therefore, reasonably soon there evolved the modern conception of aseptic surgery. All of which was essential before surgery could be

correctly classified as a specialty in medicine. As knowledge has been acquired, surgery has been subdivided and we now have many surgical specialties.

The roentgen ray, discovered in 1895, opened a vast new field in medical science. Many specialties followed in the wake of this great scientific discovery, the individual classifications being based upon the various uses of the roentgen ray. The first to gain recognition in the literature was the "radiographer" in 1896; the "radiodontist" in 1916. The "radiologist" and "roentgenologist" followed and now the "roentgenotherapist" is knocking at the door and probably will appear in the literature as such.

The invention of the bronchoscope in 1898, brought about, logically, the development of a new specialty. However, we must not think of the present day bronchoscopist as being necessarily related to the bronchotomist in 1670. May I quote G. Thompson, "I doubt not the time will come that phlebotomist will be looked upon little better than a bronchotomist, a cut throat." In 1904, the respiratory calorimeter came to the aid in the accuracy of diagnosis; so came the electrocardiograph and many other instruments.

It can be truly said that with each invention, there came an increase in medical knowledge, which brought further development, through intensive study by those who had technical aptitude. Increasing knowledge in the physical sciences has constituted the urge which has forced the development of clinical medicine along more correct lines. Knowledge being, as it is, interrelated, each new discovery moves the army of workers a step forward to more solid ground, and thus more firmly establishes humanity's debt to science.

The title "family physician" was first used in 1225, although the word "physician" appears in Genesis: (chapter 50, verse 2) "And Joseph commanded his servants, the physicians, to embalm his father, and the physicians embalmed Israel."

The study of a chart where the specialists in medical practice radiate around the family physician is extremely interesting. Black says that of the number of specialists he has been able to list, 28 were brought into the literature prior to the first of the nineteenth century, and 114 after that time, although we must remember, there are a number of moderns who have not yet been accorded a place in the literature.

Like the Egyptians, we are confronted with a breakdown of the human body, which will create a vast number of new specialists. We are forced to concede, however, in our day there is justification for most of them. For example, the endocrinologist, whose work has been based upon numerous clinical and pathologic observations, has been given recognition. It is true this practitioner is often unable to explain the function and always recognize the pathology of many of the glands which come under his specialty. But, knowledge of the glandular system has been greatly increased through the interest of workers who have devoted their lives and efforts for better comprehension of this particular part of the body in relation to the whole.

Today we can say endocrine gland research, nutrition, physical chemistry, immunology, metabolic physiology and psychology are commanding the attention of many brilliant men, who justify the appellation of specialist.

Adverting to the subject, "Did Clinical Specialization Anticipate Scientific Medicine?" naturally raises the question, "When did scientific medicine begin?" I have shown how the inventive genius of men, applied to instrumentation, has helped rapidly to evolve better understanding of the sciences, which eventuated into scientific medical practices. However, the day of scientific medicine is very generally understood to have followed the days of Pasteur, Lister, Koch and others who advanced medical knowledge through their masterly contributions. A great day, yes—but think of what has followed!

Blakeslee refers to an address of a great man of medicine, William Henry Welch, as painting a picture of medical men, reaching out to all the other sciences for aid; as traveling in cycles, sometimes to one field of medicine, sometimes to another, but always, in the end, returning to the advice of Hippocrates, to assay the facts in his own clinical field.

This method has had its corollary in the creation of a great medical organization, which movement was motivated in a school of experi-

ence. Through our medical societies, big and little, we nurture the underlying motif of acquiring and contributing medical knowledge; we know that such educational opportunities have been consistently brought to every understanding and ambitious physician. The older specialists, well trained in youth, ambitious and erudite throughout their lives, remain to this good hour the leaders of their respective subdivisions of medicine. Older specialists who received special training and those who did not, who have been ambitious and studious, are the masters. They are the leaders who have brought medical education to this new day, wherein younger men may have the advantage of an educational system which naturally requires more of him before he may begin his life work. All of which redounds to the glory of the leaders of the immediate past and present.

Forty years ago the requisites of specialism were well understood, but few physicians voluntarily equipped themselves. Competition within the profession has now become such that a young man would be foolhardy to enter the contest without extensive preparation. Those of us who have been engaged in the educational field throughout this period of medical improvement realize that high standards for entrance into our medical schools and rigid demands of the faculty, do not deter, but instead stimulate, the desire of ambitious students to become physicians.

The future yields always to educational influences; hence, I call attention again to the fact that the prospective student of medicine now knows before entering college, that he faces at least three years of preliminary medical training, four years in the undergraduate medical school; and that hospital internship is an essential part of his medical preparation, so that he can go into general practice and later into a special hospital for that training which is so necessary to prepare him for special work. Interns should have the benefit of an association with a well selected and serious minded staff that recognizes the responsibility of the education of the intern.

In this connection, one would naturally think postgraduate teaching could best be done in universities with properly organized departments, which are endowed with large clinical resources. While this is largely true, slightly digressing, I would like to mention the practical demonstration of an appreciation of the enthusiastic clinician versus the full-time teacher. In one of our universities, there is opportunity for Junior and Senior students to remain in the hands of full-time paid teachers who have not the clinical urge, or to choose an equally important part of the university, where there are great clinical teachers; men engaged in active practice, interested not only in the application of the science but in the art of medicine as well. I was informed that 90 per cent of the student body in their Junior and Senior year chose the set up where the practical and enthusiastic clinician continued his labors. How fortunate are we in having the benefit of all in our societies.

Undoubtedly the hospital, with an active enthusiastic staff, which appreciates its opportunities for teaching, is after all, the best place to train specialists. The specialist should not be a technician nor wholly an operator.

Weiskotten made a survey of medical college graduates for 1915, 1920 and 1925, who had limited or planned to limit their practice. The results showed that 70 per cent of the total number of graduates each year would eventually engage in special practice. Surgery, internal medicine, and eye, ear, nose and throat practice comprised 60 per cent of the total special practice in 1915. In 1925 these had decreased to 51 per cent, the eye, ear, nose and throat specialty showing the greatest decrease. In February, 1937, there were approximately 55,000 medical men listed practicing 25 specialties.

The World War had a very definite influence upon medical specialism. Medical men uprooted, oftentimes were assigned to special service and from that time remained in the practice of that specialty. There have also been numerous additions from the men who formerly practiced in small communities and who for economic and other reasons became specialists.

Evaluating agencies for checking the work of the new recruits and to encourage higher standards for all became a necessity. There are now about sixteen cooperating boards

which certify the qualifications of medical specialists. Standards set by the boards of various specialties should be understood by every student of medicine, particularly those who contemplate special practice. It should and will be increasingly difficult to gain recognition in medical circles unless the minimum standards of the boards are met.

The future status of medicine and medical specialism depends upon how broadly we impart our conception of service and how much education we deem essential. Jackson has said that 92 per cent of ophthalmology as represented today, has come into human knowledge within the past century. I may say that most of it has come during the past half century. No doubt this is true of otolaryngology and certainly the period of time is far less for most of the specialties.

Naturally, there have been and will continue to be changes in conceptions, attitudes and practices. We must always be progressively open-minded, although remembering that there is little that is new, but much to be gained in the application of a newer mental slant here and there; thus revealing the truth which leads to the alleviation of human suffering.

It would be difficult to conceive of many more terms used for designating specialties than we now have in the literature, plus those terms which are being utilized by groups but which are not yet accepted.

On the other hand, we are apparently on the verge of vast discoveries. Chemistry alone gives an interesting example. Recently Francis Carter Wood of Columbia University was quoted as saying: "I think the future in general medicine points toward great extension in chemistry of a type which has synthesized sex hormones, the carcinogenic substances, and the vitamins. The interaction between these various substances and the organs of internal secretion make an astonishing picture which we are just beginning to unravel."

Irrespective of the many discoveries and long lists of triumphs in the field of chemistry, there has developed, in a larger way, that basis for progress, which has existed when the better type clinician utilized the great chemist. Always chemistry has played an important part in the practice of medicine, but the subject has become far too complex to be thoroughly understood by even highly trained medical men. The interest of the modern doctor in cooperative work is more widespread now and undoubtedly the practice of medicine will be tremendously influenced by the utilization of those remedies which are becoming a part of the practitioner's armamentarium.

It has been said, in a paper by William Sunderman, "At the dawn of the modern scientific era no distinction was made between the physician and the chemist. Even in the confused period of alchemical delusion, chemistry was cultivated almost exclusively by physicians. They considered it a 'high and sacred art—an art proper to be known and practiced only by the pure, the benevolent, the learned and the wise.' The tyranny of superstition in this period was broken when Paracelsus, a physician and chemist, vigorously denounced the idea of transmutation of elements through processes of magic and necromancy and declared that the real purpose of chemistry 'was not to make gold but prepare medicines.'"

Sunderman's paper continues: "An important responsibility of the biochemistry laboratory is in the training of practicing physicians, interns and technicians. It almost goes without saying that an individual who has learned for himself a method of analysis is, as a consequence, better able to judge of its value and significance."

An address of Horlein's on "Medicine and Chemistry" is extremely worthwhile. He describes the discovery of many interesting chemical products which are of tremendous value to humanity, most of which were based upon some observation of clinical nature.

For instance, in 1897, Eijkman, physician to a prison hospital in Java, noticed the occurrence of a disease among the hospital fowl which had remarkable resemblance to the beriberi among his patients. Through his study of this phenomena, he discovered a complete experimental method of producing beri-beri and for the evaluation of the different foods in their relation to this disease. Later, with the results of feeding experiments carried out by Stepp and Hopkins it became a matter of general scientific knowledge that in addition to the hitherto known chief nutrients and salts, there

existed other unknown substances, absolutely essential to animal growth and welfare. The chemist, Casimir Funk, then made an important announcement that he had isolated from rice cortex a substance of a basic nature which had an intense action in experimental beri-beri of pigeons and to which he therefore gave the name vitamin. Owing to this discovery by Funk, the interest of chemists over the whole world has been directed to these vital infinitesimal constituents of food.

I do not propose to follow the development of our knowledge of vitamins, but it is interesting to note the cooperative effort on the part of the clinician and chemist.

Somewhat analogous is the recent isolation of a chemical substance from the pituitary body, which concerns lactation and mother instinct. Here the chemist and obstetrician join hands.

Then, to those of you who have lived in Louisiana where malaria has played such a definite part in the economy of the state, the deficiencies of quinine became apparent. Bacteriologic studies, clinical reactions, and chemical evolution brought about vast changes in the treatment of this terrible scourge. Quinine, plasmochin, and finally atabrine became known for their curative values under certain conditions. This trinity of chemical discoveries certainly means a great deal to the people of the South.

Another interesting phase of biochemistry is intercellular exchange. In the words of Israel Bram, "All our thoughts and actions are the result of intercellular chemical exchange—a veritable give and take of known and unknown secretions and excretions and the ductless glands acting as regulators of this exchange of chemicals with the thyroid gland at the helm."

This has been a valuable conception because it has opened to the inquiring mind broader fields for research. To illustrate, the imbalance of an abnormal person is oftentimes traceable to a lack of some of the necessary substances; for example, iodine. There are many clinical phases presented in the patient of a decreased amount circulating in the blood and body fluids. The normal content of iodine, which is one-sixth-billionth per cent of the fluids, cannot vary a great deal without clinical manifestation on one side or the other, either a hyperfunctioning goiter or as the hypofunctioning gland of the cretin, or many other minor degrees of imbalance which may not be expressed by these extremes.

Time forbids that I go further into this phase of science, or to take up any other of the numerous fruitful divisions of medicine.

In conclusion, I may say we look forward to increasing contributions in many fields, well-dotted with specialists, which suggests that clinical specialization has anticipated an ever-growing, broadening, scientific medicine.

MEMORIAL ADDRESS*

DANIEL N. SILVERMAN, M. D.
NEW ORLEANS

Of course, this is no time for frivolity, but I can assure you that had I been requested to make an address of this type on such an auspicious occasion, I would have thought a while, hesitated, and perhaps answered "No"; but, under the circumstances as explained by our President, I was merely commanded to do so, and had to obey as I did when I was a boy with Dr. Horton in our home town many years ago.

At this time, which marks the opening of the 59th annual session of the Louisiana State Medical Society, we are witnessing perhaps the greatest demonstration of scientific accomplishment in the history of the Society. The papers to be presented and the scientific exhibits illustrate the hours and days of labor by which the advancement and the progress of medicine have been achieved. We will derive a great deal of information from these papers and exhibits, but they represent only the visible stepping stones. There are others, which we must not forget, which were built upon the hard work and upon the untiring devotion to the benefit of humanity of those who have passed away.

Among the men who have reached their journey's end during the past year, a number were pioneers in original work in medical research; others promulgated certain theories, advanced facts; others toiled in rural sections and gave their days and nights, in all types of

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*Presented before the fifty-ninth annual meeting of the Louisiana State Medical Society on May 2, 1938, at New Orleans.

weather, to alleviate human suffering. Their work was well done. We might say we are satisfied as to their recompense in the words of Michael Angelo, "If life serves us well, we ought not to be grieved by death, because it comes from the same Giver."

I now have the sad privilege of reading a list of the names of those men who have left our midst during the past year:

Hezzie Donice Bulloch, Covington, January 31, 1938.

Guy Andrew Darcantel, White Castle, December 20, 1937.

Wilson Joseph Eroche, Raceland, December 15, 1937.

John James Gill, Chatham, February 23, 1938.

S. Dugan Graves, Bastrop.

M. David Haspel, New Orleans, June 26, 1937.

Edward S. Hatch, New Orleans, October 20, 1937.

Joseph N. Hood, Monroe, August 16, 1937.

Isaac Ivan Lemann, New Orleans, September 2, 1937.

James Leon Lewis, New Orleans, November 17, 1937.

John Wm. Lindner, New Orleans, July 17, 1937.

John Sherwood McBride, Ansley, September 13, 1937.

Leopold Mitchell, New Orleans, September 1, 1937.

Pope Webb Oden, Shreveport, June 28, 1937.

Joseph Odess Prejean, Abbeville, November 2, 1937.

George Patrick Quinn, Shreveport, February 1, 1938.

J. W. Kenward Shaw, New Iberia, February 13, 1938.

George W. Sitman, Baton Rouge, June 16, 1937.

James Frank Smith, Leesville, July 3, 1937.

Russell Edward Stone, New Orleans, June 18, 1937.

George Edgar Stovall, Columbia, June 23, 1937.

Anatole Raoul Trahan, Lafayette, December 2, 1937.

Charles A. Wallbillich, New Orleans, February 10, 1938.

Wilbur William Warner, Bogalusa.

Earl Aden Hogan, New Orleans, March 16, 1938.

I move that we stand in silent tribute to those men who have died during the year 1937-1938 since the last meeting of the Louisiana State Medical Society.

VENEREAL DISEASE*

A SYMPOSIUM

THE NECESSITY FOR PUBLIC COOPERATION IN THE CONTROL OF VENEREAL DISEASE

W. A. REED, M. D.

NEW ORLEANS

I am privileged to speak to you frankly and openly on the subject of venereal disease, a scourge which has existed from time immemorial, and which because of ignorance, taboo and fear, has filled more graves than all the combined wars since the beginning of time; a scourge that threatens to spread the scarlet letter of its presence across the very face of mankind, unless every means of defense of both the public and the medical world is firmly entrenched in this great line of battle.

It might seem on first thought that we, a great people in a great country, advanced as we are in the arts and sciences, and in medicine, have been unnecessarily slow in the recognition and control of venereal disease. Its universal existence has been well known for thousands of years, not, perhaps as we recognize it today, but at least for its contagiousness and destructiveness.

HISTORY

In the writings of the Chinese, which date back at least 35 centuries, one finds in the year 2637 B. C., a most accurate description of both gonorrhea and syphilis, a literal translation of which compares quite creditably with a description of these two diseases as found in many standard textbooks of only a few years ago.

In the fifteenth chapter of Leviticus in the Bible are two verses that without doubt refer to gonorrhea. Moses evidently was well aware of the contagiousness of the disease, since he insisted on the avoidance of contact with all

*Presented before the Louisiana State Medical Society, May 2, 1938, at New Orleans.

articles worn and used by those infected, and even required that a full week elapse after being well, before one attend the sacrifice of atonement and resume his social functions. In the book of Genesis will be found a description of the plague that visited the house of Pharaoh shortly after Pharaoh had become enamoured with the beautiful Sarai, the wife of Abraham, following which, both Abraham and Sarai were banished from the country. This occurred about the year 1921 B. C.

Again, you are all familiar with the story of King David, and his adventures with Beth Sheba, as found in the Psalms, and, some time later his mournful lamentations because of the aches and pains that tormented him which, as interpreted by the medical mind, could mean but one thing—syphilis. This episode occurred about 1034 B. C.

The "medicine ball," which is so familiar to all of you, and which is to be found in every gymnasium in the land, is named after the original medicine ball that was invented by the Persians about the year 1000 A. D. for the treatment of syphilis. History tells us that in those days the sport of tossing a mercury coated cannon ball from one patient to another was invented as a practical method of rubbing mercury into the skin for the treatment of those afflicted with the disease.

With the work of the great Pasteur, however, the darkness that shrouded the road of progress was swept away and we learned that disease is produced by microscopic germs, and not by vague undefined humors, spirits or curses, to be dispelled only by amulets, witchcraft or by the intonations of the medicine men.

Forward strides came in rapid succession. In 1831 the experiments of Ricord had already proved that syphilis was not merely an advanced stage of gonorrhea, as had been stated by Ambroise Pare two centuries before, but that the two diseases were separate and distinct from one another. In 1879, a little less than 60 years ago, Neisser discovered the gonococcus, the germ that causes gonorrhea, and only 33 years ago Fritz Schaudin discovered the pale spirochete which causes syphilis. The following year Wassermann devised the delicate blood test that still bears his name, and 28 years ago Paul Ehrlich, in his six hundred and sixth experiment, compounded a preparation of arsenic that startled the entire world by its rapid action on syphilis, and which is still sometimes called "606" or salvarsan, and which, in a more refined state, is one of the principal drugs used in the treatment of the disease today.

Therefore it is easy to see that, although venereal disease was a major plague of mankind long before the erection of the Pyramids or the fall of Troy, we have been in a position to diagnose correctly and properly treat it for only the very short period of slightly more than a quarter of a century.

EXTENT OF INFECTION

To appreciate fully the seriousness of the problem that confronts us one must realize that at least ten million people in the United States now have or have had syphilis. Each year almost a million new cases are added to this huge number. It attacks four times as many persons as scarlet fever or tuberculosis, ten times as many as diphtheria, and one hundred times as many as infantile paralysis.

One out of every twelve pregnant women examined in fifteen clinics in various American cities were found to have syphilis, which is communicable to the unborn child. It is for this reason that 25,000 babies die each year from the same disease. In fully 95 per cent of such cases the birth of a healthy child can be assured providing the existence of the infection is found in the early months of pregnancy and appropriate treatment instituted.

Each year forty thousand deaths occur from syphilis of the heart and vascular system. There are 4,500 deaths from general paralysis of the insane and 1,200 deaths from tabes dorsalis, both of which are caused by a syphilitic inflammation of the nervous system. Since each death represents a loss of from 19 to 23 years of life expectancy, one may readily see that the toll that is being exacted by those three conditions alone amounts to almost one million years of productive happy living.

One of every seven cases of blindness results from syphilis for which ten million dollars is expended each year for institutional care. One out of every ten cases of insanity is caused by syphilis, most of which require private or state institutional care, and for the treatment of whom, it is estimated, more than 31 million

dollars each year is being expended. Into these institutions more than 8,000 new admissions are being made every year.

During 1934 the National Safety Council reported that automobile accidents in this country resulted in 107,000 cases of permanent disability. Yet, during that same year, syphilis alone attacked and disabled more than a half million persons.

CONTROL IN OTHER COUNTRIES

Considerable progress has been made by a number of countries in lowering the prevalence of venereal disease during recent years. This is particularly so in Denmark, Sweden and Norway. However, there are still many foreign countries where the problem is even more serious than it is here.

A recent report by the Ministry of Public Health of France discloses some astounding facts. In that country alone 140,000 deaths occur each year, 20,000 of which are deaths at birth as a result of venereal disease. They further report that 84 per cent of congenital syphilitics die before the age of 10 years; 50 per cent of their criminals are congenital syphilitics; 50 per cent of sudden deaths and deaths due to disease of the heart and blood vessels are directly the result of syphilis; 40 per cent of all chronic hospital patients are suffering from syphilis; and 10 per cent of the entire general hospital mortality is directly or indirectly due to syphilis. In spite of this appalling report they, too, are securing results in their campaign against venereal diseases. In 1916, there were but 40 venereal clinics in the whole country at which time the prevalence of primary syphilis in the army was 21 cases for every 1000 soldiers, while in 1936, by which time 1821 clinics had been established, the incidence of primary syphilis among the soldiers had fallen to less than two cases per thousand men per year.

One might go on for hours citing facts and figures to impress upon you the fact that the control of venereal disease is equally as serious as the fight against tuberculosis, cancer, typhoid fever, malaria or any other disease to which the human race is heir.

We must not forget that the time is here, now, when the railroads and many of the larger industrial corporations are about to require that all employees be free of syphilis and gonorrhea in order to maintain their positions. Furthermore, practically all the large insurance companies, realizing the importance of syphilis with regard to life expectancy, have been giving serious thought to the necessity of requiring a negative blood test by each applicant for insurance before permitting him to take out a policy for more than $5000. My prediction is that, before many years, in order to secure an insurance policy of any size, such a blood test will be as necessary a part of the preliminary medical examination as the analysis of the urine for kidney disease, or the investigation of the heart and blood pressure for heart disease.

Fortunately, considerable progress has already been made in this gigantic struggle, through the efforts of the Venereal Disease Division of the U. S. Public Health Service, the American Social Hygiene Association, the American Neisserian Society, and, more recently, by the local boards of health of almost all the states of the Union. A short time ago the American Legion adopted resolutions for the combatting of venereal disease, and no longer ago than last year similar resolutions were passed by the American Youth Congress at its meeting in Milwaukee.

It therefore becomes necessary for us as a whole, laymen and doctors alike, to form a firm bond of alliance, in order that we may lure this monster of venereal disease from its lair and slay him with as great courage as the brave knight slew the seven-headed dragon of mythology.

To accomplish this end we must adopt and strictly adhere to a plan which might be outlined as follows: (1) Education of the public by enlisting the services of the many existing auxiliaries and lay organizations, public lectures, newspaper publicity, radio talks, moving pictures; (2) more complete instruction to students in public schools and universities; special courses to practicing physicians and in graduate medical schools; (3) more public health or hospital clinics for the free treatment of those who are not able to pay for medical services; (4) the performance of a routine Wassermann test on all patients entering a hospital, unless it has already been done at a recent previous date. This applies particularly to all expectant

mothers; (5) the requirement of a general physical examination, as well as a blood test for syphilis, for both parties desiring to marry.

SUMMARY

When we begin to look upon both gonorrhea and syphilis as communicable diseases, rather than moral issues, and adopt such a plan as this, we can look forward to the payment of dividends beyond our fondest dreams, even to the lengthening of the present span of life to the ripe old age of eighty years or more.

If we permit prudery, ignorance, taboo and fear, the malignant four horsemen, who have so long served as a bodyguard for syphilis, to continue to ride across the face of this nation, we can most certainly look forward to the production of a race of weaklings, neurotics and morons, doomed to perish before the onslaughts of a more clearly thinking people.

THE PRESENT STATUS OF VENEREAL DISEASE CONTROL IN LOUISIANA

J. A. COLEMAN, M. D.

NEW ORLEANS

Today, social diseases constitute one of the world's greatest problems, and only recently have they been forced out in the open and given great publicity by even the lay press.

What do we mean by social, venereal or sexual disease? These expressions cover maladies which are usually spread or transmitted during sexual intercourse. In other words direct contact. In this group, there are three diseases: gonorrhea, syphilis and chancroid.

The most common, if not the most important of these is gonorrhea. I emphasize this disease in view of the levity associated with its discussion by the layman. Hence, the expression: "No worse than a bad cold!" Certainly, no greater error was ever made.

It is said that gonorrhea is three to six times more prevalent than syphilis and it is impossible to get accurate statistics on gonorrhea due to the fact that 80 per cent of the cases are treated by laymen. Much of the lack of knowledge, too, is due to the puritanical state of mind of some doctors. Too many doctors still believe that nobody has syphilis and gonorrhea except negroes, prostitutes and criminals. Too many doctors, surprising as it may seem, still think of syphilis and gonorrhea as "a disgrace" and not a "disease," and they hesitate to suggest the necessary steps for diagnosis lest the patient's feelings be wounded; and then, to protect his patient, the doctor fails to report the disease or the source of infection.

Syphilis is a curable disease—and 80 per cent of the cases can be cured if treatment is begun during the first year of infection and continued uninterruptedly for a sufficient length of time. The percentage of cures decreases as the duration of infection increases. But, even in later stages of syphilis, where cure is more difficult, the progress of the disease can be stopped; and many of the crippling manifestations—such as heart disease and insanity—can be prevented. The early case is the infectious case. Treatment in the early stages does two things: it renders the individual non-infectious and, if continued long enough, it cures him of the disease. By early syphilis is meant an infection of four years or less.

Treatment of early syphilis has been standardized. Every patient, to obtain a cure, must receive 30 injections of an arsenical compound and 40 of bismuth. This treatment must be given continuously, week after week, with no rest periods. This means 70 weeks of continuous treatment. Moreover, treatment must be by schedule and not by serologic reports.

The private physician plays the most important role in the control of syphilis, as well as in all health procedures.

There is no knowledge relative to when or where syphilis originated. In the history of communicable diseases, as compared with leprosy, smallpox, tuberculosis, malaria, and plague, syphilis is a new disease. Without doubt, it existed before the 15th century, but there is no exact record for the period prior to 1493 when the disease became recognized.

The intimate circle of friends of every person in America whether he thinks so or not, numbers one, two or more individuals who have syphilis. This disease causes more deaths every year than any other contagious disease of every kind, and beats all diseases of any kind excepting heart trouble, cancer, pneumonia and neph-

ritis. The United States lost 126,000 soldiers during the World war; it loses more than 100,000 civilians every year from syphilis. These losses are only part of the sad history. Syphilis produces so many after effects, imitates so many other diseases there is no way of telling the full extent of the damage. Eleven per cent of all persons admitted to New York State institutions for the insane—a fair index for the country—are put there by—syphilis! About 10 per cent of the deaths due to heart disease are the result of the infection of syphilis.

The majority of patients under treatment in public clinics are in the chronic or late stages of syphilis. Hundreds of millions of dollars are poured out every year, for hospitalization of syphilis-borne infirmities. Tax payers meet most of these bills, because the chronically ill, usually, are also indigent. Employers pay heavily, too, in compensation relief and medical costs for venereally infected employees.

Unfortunately, there is no method of preventing these diseases by vaccines, as in typhoid, smallpox and diphtheria; therefore, to control the disease, it must be treated. I realize the difficulty that the doctor has in giving adequate treatment, for the average patient cannot understand the necessity of continuing treatment for 18 or more months. After a few shots, he feels much improved and thinks the doctor is trying to run up a bill.

ADVANCES TO CONTROL VEREREAL DISEASE IN LOUISIANA

In Louisiana, thanks to the wholehearted and unselfish cooperation of the medical profession, we have started on a Venereal Disease Control Program which we hope and pray, will continue to grow by leaps and bounds. It is impossible to work out a plan that would be satisfactory on a state-wide basis, therefore, each parish medical society or group is consulted before any attempt is made at treatment, and the local society or group agrees upon a plan. We discourage the local Health Unit Directors treating any case of syphilis; but, in two or three instances, at the request of all members of the local medical profession, the Director is administering the treatments to a limited number.

It is our desire to cooperate with the medical profession in every way possible in the control of syphilis! It is with regret that we are unable, at this time, to furnish arsenicals, bismuth and distilled water to all physicians for all patients. At present, due to lack of sufficient funds, we are furnishing treatment only to organized clinics in charge of a local physician. At these clinics, we treat only patients who have been certified by the Welfare Department as to indigency. Outside of Welfare clients, already receiving aid, any patient applying for certification must be referred to Welfare Department by a reputable practicing physician over his signature. It is necessary, when a patient is admitted to treatment in a clinic that treatment be continued without interruption, and it is also necessary to follow-up the patient who fails to attend clinic, to see why he or she did not report and, through every means possible, to see that he or she continues treatment. In this feature, we are indebted to the State Welfare Department for assistance in follow-up work as well as hearty and unselfish support in various ways.

I realize that this program is very inadequate and unsatisfactory, but we in Louisiana hope that, in the not too distant future, Federal funds will be made available to pay the private physician well for his services in conducting these clinics. The physician is all too often called upon to do "charity work," and it is not fair to place the additional burden of syphilis control upon the medical profession without their being paid for their services.

As you probably know, there are at present 39 full-time health units in Louisiana; and, in all these parishes, we have started a case-finding program; and, in some parts of the state, where there is a dense negro population, the results are appalling. In some cases, taking a plantation as a whole, Wassermann survey showed 35 to 45 per cent positive reactions.

Some physicians make it a routine practice of taking a specimen for Wassermann on every patient, no matter what the complaint. If all physicians would make this a routine practice, it would result in the finding of thousands of cases of latent syphilis and it would go far toward the ultimate control.

The question comes up: Why make such an effort to find syphilis when we do not have provisions to treat the disease adequately? We can

only cooperate with the medical profession in making the best of an unsatisfactory situation, in the hope that soon our dreams will be realized in that free laboratories will be available to all physicians, free treatment will be furnished to physicians for all their cases regardless of their ability to pay, all indigent cases found to take adequate treatment—not at a centralized public clinic where transportation to and from clinic proves to be a vital problem—but at local clinics conducted by local physicians, paid by the government. Let us take the "charity" burden from the shoulders of the private physician instead of trying to place this additional burden upon him.

Out of the 39 full-time health units, all have venereal disease clinics going except five or six, and in all we have over 40 organized clinics in the state, having under treatment at this time a near approximation of 3300. With your continued cooperation, we hope to shorten the days between our present struggle and the gratifying realization of our dreams.

DIAGNOSIS AND TREATMENT OF GONORRHEA

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Gonorrhea has been known to the Chinese for more than 5000 years. It was proved to be due to the gonococcus by Neisser in 1879, was first inoculated into the human urethra by Bumm in 1885, and stands today a most difficult medical and social problem. It is responsible for 20 per cent of blind children, many neurasthenics, invalids and cripples, and millions of dollars loss in wages each year.

The frequency of gonorrhea is said to rival that of the common cold. Among the factors responsible are, first—the nature of the disease itself. There is a period of activity followed by a latent stage, during which all symptoms may disappear while the gonococcus is still present; second—many infections occur during the incubation period. An individual may become infected and transfer the disease during the next few days before symptoms develop; third—the ever-present menace of drugstore treatment. It has been shown by various Social Hygiene Agencies that in many communities, two and a half times as many individuals apply to druggists for treatment as apply to recognized medical agencies. The chief fault with this type of management is that the patient is left the sole judge of the course and cure of his infection. Charlatans, quacks, prostitutes and their free competitors contribute their share in making gonorrhea a difficult disease to control.

The successful management of any disease is dependent largely upon careful methods of study and examination. Finding Gram-negative diplococci does not necessarily make the diagnosis of gonorrhea. It must be remembered that practically all cocci multiply by fission, and at some time or other during the course of their development they appear to be diplococci. They may be Gram-negative, are often seen within the leukocytes and may so closely resemble the gonococcus that it is impossible to tell the difference on a single stain. If on repeated stains, Gram-positive and Gram-negative organisms are found in the same field, and especially if cocci and diplococci of irregular size and arrangement are present, one is probably not dealing with the gonococcus. The gonococcus is always Gram-negative. It occurs in two and multiples of two, is always of uniform size, shape and arrangement, and is found chiefly within the leukocytes.

Finding the gonococcus determines the presence of infection, but its location and the extent to which it has invaded the tissues must be determined before the diagnosis can be considered complete. In order to locate the infection accurately, it is necessary to understand the anatomical make-up of the genital tract and the possible barriers to invasion. It has been shown that squamous epithelium is very resistant if not entirely immune to gonococci, also that transitional cells are not readily invaded unless the submucosa is rich in glandular tissue; on the other hand columnar epithelium is highly susceptible to gonorrheal infection. For that reason one should know the type of cells found in each anatomic division in order to understand where infection is most likely to be found.

ANATOMIC DIVISIONS

The anterior urethra is that part of the canal extending from the external urinary meatus to the anterior layer of the triangular ligament. The meatus is lined with squamous cells, while

the rest of this division, including the crypts and glands of Littre, is lined with columnar cells. It is in this part of the canal that gonorrhea starts and where it remains in a large number of well-handled cases.

The membranous urethra lies between the two layers of the triangular ligament, and is completely surrounded by the cut-off muscle. It is lined with transitional epithelium which lies in close proximity to the muscle. There are no submucosal glands, and for that reason, stricture formation from infections is never seen in this part of the canal. Because of its construction, very little infection occurs here and it acts as a relative barrier to extension of infection from the anterior to the posterior urethra.

The posterior urethra runs from the bladder outlet to the cut-off muscle or posterior layer of the triangular ligament. It is completely surrounded by the prostate. The epithelial lining is of the transitional variety but all mucous channels entering from the prostate are lined with columnar cells, consequently the prostate shows some degree of infection in every case of posterior urethritis. The emptying channels present poor drainage possibilities and the prostate once infected has a tendency to hold infection for a long period of time.

Cowper's glands lie on either side of the membranous urethra between the layers of the triangular ligament. They empty by small ducts into the anterior urethra at the bulb. Their involvement is not very common but is readily recognized as a painful swelling in the perineum, easily felt between an index finger in the rectum, and thumb on the outside.

The seminal vesicles lie below the base of the bladder and above the lateral lobes of the prostate. They become infected in about 2 per cent of cases, but apparently do not harbor the organisms for a long period. They have a tendency to become sterile, as in case of fallopian tubes, and are probably not a contributing factor in cases of prolonged chronic gonorrhea.

Epididymitis is a frequent complication in clinic patients, but is fairly uncommon in well-controlled private cases. In the majority of instances it is found to follow either too strenuous treatment by the physician, or poor behavior on the part of the patient. Abscess formation is unusual, and involvement of the testicles rarely occurs. Sterility is the most important sequel.

SYMPTOMS

It seems necessary to discuss symptoms at length for the reason that the complaints depend so largely upon the patient's mental attitude toward his infection. Neurotic individuals suffer agony while the phlegmatic has only discharge. The ordinary case of gonorrhea is not a painful disease. With involvement of the anterior urethra there is discharge, redness of the meatus, slight smarting on urination, and only rarely do the dorsal lymphatics and inguinal lymph nodes become a part of the clinical picture. With extension to the posterior urethra, the second glass of urine becomes hazy, but often there is no other indication that the disease has spread to this part of the canal. There may be slight frequency of urination and an occasional painful erection. If severe, however, there is urgency, tenesmus, terminal hematuria, and, if the prostate is swollen, there may be fever, leukocytosis and difficult urination. Occasionally an acute right vesicle or extension along the right vas may simulate appendicitis.

Prevention is the most important step in the control of any disease, and, in so far as venereal infections go, it would be ideal to have individuals abstain from illicit sexual exposure; but since that cannot be expected of our present crop of human beings, we as physicians must teach individuals prophylaxis and leave the moral question to be settled by other agencies.

Chemical prophylaxis is 90 per cent effective if used within the first half hour. It should be used as late as 24 hours, but is no good after the gonococcus penetrates the mucosa.

Once the disease has developed it becomes our purpose to get rid of it in the shortest possible time. Patients who have had the disease only a short time are less likely to spread it by becoming lax in their behavior; the possibility of complications is reduced to a minimum and the patient's economic situation is little affected by loss of work or cost of treatment.

COMPLICATIONS

The patient is responsible for some of the complications that arise and time should be taken during the first visit to impress upon him the importance of good behavior; alcohol and

sexual excitement are prohibited; strenuous physical exertion may interrupt a smooth course of the disease, but if the patient is a laborer and his living depends upon his job, he is advised to continue working and accept the chances of complication. Ether fumes have the same effect as alcohol, and patients subjected to them have trouble. With the exception of alcohol, the diet is not restricted. Burning on urination is due to liberated toxins and not to condiments, neither does their omission from the diet relieve this symptom. If the patient is annoyed by painful erections, coffee may be left off, not that it has any direct influence, but for the reason that it may contribute to a restless night. Free use of soap and water in personal cleanliness reduces the chance of the patient transferring infection to his eyes. It also keeps him from becoming a menace to female children in the family who may become infected by accidental contamination.

TREATMENT

In so far as drugs are concerned, there are at our disposal the various preparations for administration by mouth, vaccines and their allied products for intradermal or hypodermic injection, and the solutions long used for treatment to the urethra. Until the past few months, urinary antiseptics given by mouth were fairly unsatisfactory. Alkalis relieve burning on urination but serve no other useful purpose. Pyridium has been widely used by American urologists, and good results are said to have been obtained. Patients with distressing bladder symptoms from acute posterior urethritis are certainly made more comfortable by its use, but I am unable to say whether or not it has any antiseptic value. Sulfanilamide has recently appeared upon the market, and its value has apparently been established. Many clinicians have been using enormous doses and report the cure of large numbers of patients in one to three weeks' time without support of other treatment. My own experience has been confined to patients treated with smaller doses, usually 20 grains daily and perhaps for that reason I have been unable to duplicate the results of others. After seeing some of the toxic effects of the drug, including autopsy specimens of two cases (not my own) of patients where sulfanilamide was given as the cause of death I have been unwilling to risk the larger doses. It has also been my custom to continue routine urethral injection and irrigation. Too many of the cases tried on sulfanilamide alone recurred after the drug was discontinued. It is my feeling at the present time that sulfanilamide reduces the likelihood of complications and shortens the course of the disease. I also believe that, if used in conjunction with local treatment, a larger number of patients will be cured in a shorter period than if the drug is used alone.

Vaccines and filtrates have been a complete failure in my hands. The number of complications occurring in a fair sized group of cases indicate that they are not only useless as a therapeutic measure, but actually may do harm.

In the use of local treatment to the urethra, the importance of non-irritating drugs and gentleness of application cannot be too strongly emphasized. Potassium permanganate solution in strength of 1:8000 has been used with satisfaction for many years. Pelouz, in a recent publication, stated that in the treatment of gonorrhea if he were restricted to the use of one drug, potassium permanganate would be his choice. It is used as an anterior irrigation for anterior infections, and as a posterior irrigation when infection spreads to that part of the canal. Protargol ¼ to ½ per cent and neosilvol 5 to 10 per cent are two of the popular drugs for hand injection to be used by the patient. About 5 or 6 c.c. of the solution is injected three or four times daily with a glass blunt-tip rubber bulb syringe. In uncomplicated cases the patient reports to the office two or three times each week, for five or six weeks. Treatment is then discontinued, and if no recurrence takes place within the maximum incubation period, the patient may be allowed to resume his normal activities. Unprotected intercourse, however, should be prohibited for at least three months.

If infection spreads to the posterior urethra, the prostate becomes involved and treatment is often long drawn out. Anterior injections are continued to control discharge, and posterior irrigations of potassium permanganate are started. When the patient is comfortable, gentle prostatic massage may be started, and if symptoms do not recur as a result of such treatment, it should be continued twice a week, until the prostatic secretion is free from infection. Oc-

casionally the prostate becomes swollen, and there is an associated rise in temperature, leukocytosis and difficult urination. Abscess formation may occur. The indications are rest in bed, local heat and limitation of fluid intake. Surgery is rarely necessary.

Infected seminal vesicles are allowed to pass through the acute stage, and then treated by stripping, along with prostatic massage. Injections of antiseptic solutions into the vas or ejaculatory ducts is apparently useless.

Cowper's glands occasionally become infected, usually suppurate, point in the perineum and demand surgical drainage. They are easily removed if chronically infected.

Epididymitis is most commonly caused by exercise on a full bladder, forcing infected urine down the vas. Occasionally it may occur by surface extension, in which case the vas is swollen before the epididymis. It is ushered in by pain, swelling and fever, usually lasts 10 to 14 days and may shorten the course of the disease. The indications are rest. support of the testicles by an adhesive plaster bridge, and opiates for pain. Surgery is rarely indicated.

In regard to the use of instruments in gonorrheal infections it is usually safe to say that they should never be used as long as the gonococcus is present. On the other hand, I would like to make two exceptions to this in cases of prolonged chronic infection. One is the use of sounds in the anterior urethra for the purpose of locating infiltrations of the submucosal glands. The other is the use of an endoscope for the purpose of destroying the glands by pure silver nitrate fused on a fine wire. I have seen these infections terminated by two or three such treatments on more than one occasion.

SUMMARY

The spread of gonorrhea is vicious and hidden, and its complications are frequent, intractible and serious. It is responsible for more marital unhappiness and sexual disability than any other disease. It is regarded with prejudice, indifference and secrecy, is distasteful and disagreeable to the general medical profession. The only means of improving the present situation lies in the education of laymen as to means of prevention and medical workers better trained in methods of treating the disease after it has developed.

COMPLICATIONS TO ANTI-SYPHILITIC THERAPY

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NEW ORLEANS

In this time of radical curative procedures of syphilis therapy it is wise to pause for a moment and to glance in retrospect over what has been accomplished in this field. Certainly we have gone far in the past thirty odd years since the discovery of the actual cause of syphilis. Probably the resultant diagnostic acumen has overshadowed the therapeutic progress, but be that as it may, we certainly know more about syphilis today or think we do than did our predecessors of a half century ago.

Wassermann and Hati's contribution in the diagnostic field, the so-called Wassermann test, is responsible for a good deal of this enlightenment, but are we becoming too much dependent on laboratory reports and losing some of the diagnostic keenness which our teachers possessed?

While we probably have improved our therapeutic armamentarium considerably since the beginning of this century, there are certain facts which must be considered. These are concerned namely with: (1) The virulence of the organism; (2) the resistance of the host. These are possibly closely allied with the following: (3) the increasing amount of visceral complications; (4) the alarming increase in central nervous system manifestations.

Perhaps much of the increase in visceral and central nervous system syphilis is due to better diagnostic facilities, but the fact remains that virulent primary phases and fulminating secondary eruptions are on the wane. Not so many years ago death due to syphilis in the primary and secondary stages was not an uncommon complication, but today it is indeed rare.

Probably the much debated question of individual immunity comes up again or even the attenuation of the spirochete itself may be the answer. It is not improbable that both of these things do occur and are occurring.

Most everyone who has had much experience in the treatment of syphilis believes that while the present combined method of heavy metal and arsenical therapy offers much improvement

over older methods of antisyphilitic therapy it is still not the panacea we all hope for. Again we know that much of the disappointment in antisyphilitic therapy is due to injudicious use of the available drugs. Certain factors enter into the treatment with these medicaments, which are often disregarded or ignored.

The age of the patient is the most important factor in the treatment of syphilis. If a therapeutic paradox is to be avoided in which the disease is cured but the patient is killed, we must consider the tolerance of the individual—age brings on retrogressive changes in which repair is slow. Blood vessels and visceral tissues alike must bear the brunt of too vigorous therapy.

Next to the age of the patient the stage of the disease itself is of utmost importance. It is folly to hope to cure a deeply entrenched late syphilitic infection which has marked visceral destruction, but at least these patients may be prevented from becoming worse. We can hope to halt the inroads of the syphilitic infection and make the patients comfortable. Then too these individuals may be kept from becoming public charges by preventing late central nervous syphilis and visceral sequelae.

CONTRAINDICATIONS TO ARSENICALS

A little consideration of the paramount contraindications will often prevent much subsequent grief. Since arsenicals are the chief offenders it might be wise to list the chief contraindications to this metal:

1. Diseases of the brain and cord:
   - (a) Acute meningeal.
   - (b) Marked vascular involvement.
   - (c) Diffuse encephalitic process.
   - (d) Myelitis.
2. Diseases of the liver:
   - (a) Acute diffuse hepatitis.
   - (b) Late extensive hepatitis
   - (c) Cirrhosis.
3. Diseases of the cardiovascular system:
   - (a) Extensive myocarditis.
   - (b) Coronary lesions.
   - (c) Aneurysms.
   - (d) Bacterial endocarditis.
4. Diseases of the kidneys:
   - (a) Interstitial nephritis (late).
   - (b) Chronic nephroses.
5. Diseases of the spleen:
   - (a) Cirrhotic splenomegalies.
6. Diseases of the lungs:
   - (a) Acute advanced tuberculosis.
   - (b) Acute febrile septic conditions.
7. Diseases of metabolism:
   - (a) Hyperthyroidism.
8. Diseases of the skin:
   - (a) Allergic dermatitis.
   - (b) Exfoliative dermatoses.

After a consideration of the foregoing contraindications some thought should be given to the selection and preparation of the drug and the mode of administration. The need for utmost care in the sterilization of equipment and the manner of mixing the therapeutic agents is paramount. After the dosage and manner of injection is decided upon and the drug has been given, many factors enter into the picture to complicate it further. Some of these are uncontrollable and are due chiefly to dyscrasias of the disease or the individual. Some are dependent entirely on the reaction of the patient due to idiosyncrasy or hypersusceptibility. But all too often reactions are due to a slip up in technic. Saturation and toxic manifestations are indeed a thing apart, but they merely darken the picture.

The general reactions following the arsphenamines are indeed many and time can be taken merely to mention some in the form of an outline, as it would take chapters to discuss these various reactions in detail. The general reactions following the arsphenamines are:

1. Jarish Herxheimer reaction:
   - (a) Local.
   - (b) Visceral.
   - (c) Cutaneous.
2. The reaction produced by unalkalized arsphenamine.
3. Mild reactions due in part to route of injection or the drug:
   - (a) The tubing reaction.
   - (b) The "ether" odor of the arsphenamines.
   - (c) Gastrointestinal reactions.
   - (b) Schick-like reaction.
4. The angioneurotic symptom complex:
   - (a) Nitritoid crisis.
5. Reactions due to myocardial disease.
6. Postarsphenamine dermatitis:
   - (a) Due to saturation.

(b) Due to sensitization.

7. Reactions due to injury to the nervous system:
   (a) Polyneuritis.
   (b) Hemorrhagic encephalitis.
   (c) Transverse myelitis.
8. Blood dyscrasias:
   (a) Thrombocytopenia.
   (b) Granulocytopenia.
9. Postarpshenamine jaundice.
10. Renal injury from arsphenamine.

Many of these untoward effects can be avoided by such simple precautions as careful history taking and questioning concerning reaction following previous injection. It is necessary to know what mild reactions happened after the last injection, both systemic and cutaneous. The simple precaution of giving a preliminary heavy metal injection before starting intravenous arsenical therapy prevents many serious complications. Itching of the skin or even erythema of the areas where the skin surfaces rub together as in axillae, is often a prodromal sign of arsenical intolerance or saturation—just as burning along a vein at time of injection, independent of infiltration or extravenous injection, often indicates an approaching nitritoid reaction.

Conjunctivitis and nausea are all symptoms worthy of investigation and frequently are heralds of ensuing danger. If a patient has been properly prepared by fasting and catharsis and still becomes nauseated after diminished doses of arsenicals, a change to a milder form of arsenical therapy or discontinuation of the drug, at least temporarily, is indicated. What has been said of the arsenicals applies equally as well to the heavy metals, but the complications of these are less frequent. Proper oral hygiene and dental care will eliminate many of these unsought sequelae.

BISMUTH REACTIONS

Bismuth is neither as powerful nor as rapid in its action on the spirochetes as are arsphenamine or neoarsphenamine, but it is apparently more efficacious than mercury. Bismuth is an excellent heavy metal to use in conjunction with the organic arsenicals. If an intolerance or resistance to the arsenicals exists it is an effective drug when used alone or with iodides. The complications following the use of bismuth either intramuscularly or intravenously are not as numerous or as serious generally speaking as are those associated with arsenical therapy. The sequelae following intravenous colloidal bismuth preparations are more numerous than by the intramuscular route as the drug is much more toxic when given intravenously. The speed of absorption of the intramuscular injection is dependent upon the type of material injected. The water soluble preparations are much less painful than the oil soluble ones, but it must be remembered that the toxicity of a heavy metal depends greatly on the rapidity of absorption of the drug, consequently, the oil soluble preparations are safer even though they are more painful.

A consideration of the condition of the kidneys, gastrointestinal tract, especially the stomach, and the hygienic status of the mouth is certainly necessary before instituting heavy metal therapy. Some of the more common reactions following bismuth injections are:

1. Local accidents.
2. Systemic reactions.
   a. Febrile.
   b. Stomatitis.
   c. Gastrointestinal upsets.
   d. Cutaneous reactions.
   e. Nephritis.
   f. Nervous system reactions.
   g. Blood dyscrasias.

Embolus following injection due to perforation of a blood vessel and injection of the oil preparation into the blood stream can be avoided by the simple precaution of pulling on the plunger and looking for blood on the syringe before injection of any material into the muscle of the patient.

The gastrointestinal upsets are at times quite pronounced and necessitate temporary discontinuation of the bismuth therapy.

The cutaneous reactions are bizarre and atypical. Most frequently they resemble superficial mycotic infections. Time will not permit a discussion of the various complications so I must be content with a mere mention of them.

MERCURIAL REACTIONS

The systemic reactions following mercury therapy, while similar to those of bismuth, are probably more numerous due to the greater toxicity of the mercurials. Because of the general use of mercury both by mouth and in in-

unction form there are added possibilities of reactions. Bismuth when given orally has not proved as effective as is mercury given by the same method. Then too inunctions of bismuth have not been adopted for general use because of their lower therapeutic value.

While the safest method of giving mercury is by inunction it is an uncertain method, as one does not have complete control of the patient and has no practical accurate way of determining how much of the drug is actually absorbed and utilized. The oral method of mercurial therapy has many disadvantages, also, as it precipitates gastrointestinal upsets and the actual absorption index is difficult to determine.

The systemic reactions of mercurial therapy may be briefly listed as follows:

1. Local accidents.
2. Systemic.
   a. Stomatitis.
   b. Colitis.
   c. Cutaneous outbreaks.
   d. Nephritis.
   e. Nervous disorders.

Since the introduction of bismuth in 1922 by Sazerac and Levaditti as a practical therapeutic adjunct of our antisyphilitic armamentarium, it has greatly replaced mercury for that use. Many doctors still use intravenous mercury injections, and intramuscularly also, but the intravenous method is of relatively higher toxicity and kidney damage is a common sequel. Herxheimer reactions are not uncommon following intravenous injections of heavy metals, but to a lesser degree than with arsenicals.

IODIDE REACTIONS

The exact status of iodide in acute syphilitic therapy is a much debated question. It is rather generally agreed by syphilologists that iodides are of little value in the treatment of early syphilis other than as a tonic, if of any value even for that purpose, but since syphilis, like all specific granulomatas, heals with scar tissue formation then probably the iodides do help prevent overgrowth of scar tissue and enable the drugs with spirocheticidal properties, to penetrate the foci of late syphilitic infection. Iodides have no selective action on any type of scar tissue so care should be taken in prescribing the drug in cases of healed or arrested pulmonary tuberculosis. The question of idiosyncrasy and saturation applies here just as in other therapeutic agents. The use of iodides in cases with diseased thyroid glands should be decided upon only after determination of the type of hyperthyroidism. A few of the common reactions to iodine therapy are given below, but again an apology is made for the brevity of discussion which time necessitates:

1. Coryza.
2. "Iodic grippe."
3. Skin eruptions.
4. Nervous system complications.
5. Miscellaneous symptoms of iodism.

The complications involving the mouth such as salivation and marked coryza are probably the ones most frequently encountered, although gastrointestinal upsets are not uncommon. Care should be taken to avoid these complications during pregnancy.

The cutaneous eruptions vary from simple iodide acne to the fungating lesions sometimes seen in cases of iodide saturation. It is important to remember that the halogens may be transmitted to nursing infants by mothers on iodide therapy. Iodide eruptions are occasionally seen in nursing infants who receive the drug by way of the mother's milk. Usually the discontinuation of the drug in mild cases will suffice to clear up the eruption.

COMPLICATIONS OF PYRETOTHERAPY

With the increase in the use of fever as a therapeutic agent no general paper on syphilitic therapy or its complications would be complete without listing the complications of malaria therapy and of electropyrexia—a brief outline of the contraindications and complications of these two generally accepted methods of pyretotherapy are here given.

Contraindications to Pyretotherapy:

1. Heart lesions with myocardial degeneration.
2. Anemia.
3. Kidney complications.
4. Marked glandular disease.
5. Debilitated patients (circulatory asthenia.)
6. Meningovascular syphilitics with localized lesions.

Complications of Therapeutic Malaria:

1. Pyogenic infections.

2. Albuminuria and casts.
3. Mild icterus.
4. Uremia.
5. Toxic psychosis.
6. Anorexia.
7. Severe toxemia.
8. Secondary anemia.
9. Convulsions.
10. Aggravation of gastric crises and shooting pains.
11. Hemiplegia.
12. Ruptured spleen.
13. Circulatory collapse.
14. Acute bulbar palsy.
15. Pneumonia.

Reactions and Complications of Electropyrexia (Inductotherm):

1. Dyspnea.
2. Restlessness.
3. Dimness of vision (at height of the fever).
4. Herpes simplex facialis.
5. Vomiting.
6. Precordial oppression.
7. Tachycardia.
8. Cyanosis.
9. Burns.
10. Marked loss of weight.
11. Uremia (rare).
12. Vascular collapse.
13. Sudden rise in temperature above 107 degrees F. with death.
14. Tetany due to alkalosis.

No plan of antisyphilitic therapy is complete without periodic examination of the spinal fluid. These spinal surveys are in some cases definitely contraindicated. The following chart covers the conditions generally accepted as such.

CONTRAINDICATIONS TO SPINAL PUNCTURE (RHACHIOCENTESIS)

1. Brain tumor.
2. High blood pressure; severe myocarditis.
3. Arteriosclerosis.
4. Recent cerebral hemorrhage.
5. Intercurrent infections.
6. Meningitis of cord.
7. Certain blood dyscrasias.
8. Obvious deformity of the lumbar spine.
9. Pregnancy.
10. Marked debilitating systemic disease.

The complications of spinal puncture are too well known to warrant discussion here and the precautions necessary to alleviate these sequelae are in general use.

SUMMARY

In closing this elementary presentation an apology is offered for its inadequacies which partly are necessitated by limitation of time of presentation. Too much emphasis cannot be made of a few points, however, and they are: (1) Treat to cure in early syphilis; (2) treat to tolerance always; (3) use arsenicals early when possible and combine with heavy metal therapy; (4) consider the age of patient and duration of disease ratio at all times; (5) if clinical cure is not possible attempt to arrest the disease and prevent further sequelae; (6) thorough and frequent clinical check up is an integral part of any antisyphilitic routine; (7) know and respect the contraindications to each form of therapy and the complications will be few; (8) the proper treatment of syphilis embraces a thorough knowledge of the individual patient's physical status. It is not merely a technical procedure of injecting drugs; (9) in early syphilis "make haste" cautiously—in late syphilis cease making haste and be more cautious.

RADIATION TECHNIC IN CARCINOMA OF UTERUS*

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Just a few years ago there was a division in the minds of medical men as to the proper treatment of appendicitis. This division of medical opinion resulted mostly from the fact that proper surgical technic, proper selection of cases for radical treatment and proper preparation of the patient had not been carefully worked out. As a result, failures were frequent, creating in the minds of many good doctors, the belief that non-surgical treatment of appendicitis was just as effective and more so than surgery. Gradually, as a perfected technic was developed, as proper selection of cases for operation was found necessary and their preparation for operation found essential, results improved with a unified medical mind that the

*Presented before the fifty-ninth annual meeting of the Louisiana State Medical Society on May 3, 1938 at New Orleans.

proper treatment for appendicitis is surgical removal.

Among well informed members of the medical profession today, a large majority agree that the proper treatment for uterine carcinoma is radiation. A minority are still of the opinion that radiation has not proved its claims. This belief results from the one and only fact that their observations have had to do with cases in which improper radiation technic was used. Right here let me say there is no one technic that can be called the best. There are many ways of properly applying radiation in uterine carcinoma; there are many more that are improper, worthless and harmful.

In 1922, John G. Clark of Philadelphia made the statement that he believed the treatment of uterine carcinoma was a radiologic problem. This statement brought consternation in the ranks of the surgical profession, but hastened the final adoption, generally, of his opinion.

I do not feel that this discussion calls for any argument as to the efficacy of radiation in uterine carcinoma. The literature today is voluminous and very conclusive to those seeking facts without bias.

I start out with the premise that radiation is the proper treatment of uterine carcinoma. That being the case, what is the correct technic of applying the radiation?

We frequently hear and read papers written on the radium treatment of uterine carcinoma or carcinoma of the cervix. These discussions are usually by men who are primarily surgeons who have taken up radium therapy as a side line, a kind of economic adjunct. Many cases of carcinoma of the uterus can be cured by radium alone, but it is felt that no woman with uterine carcinoma has been given her best chance of a permanent cure unless she has had both radium and roentgen ray radiation properly and thoroughly applied. So by radiation technic is meant the method of using these two agents.

The proper technic involves the careful consideration in each case, of three steps: (1) The selection or classification of the patient for treatment; (2) the preparation of the patient for treatment; and (3) the administration of the radiation.

In the selection and classification of the case, it is assumed that the proper diagnosis has been made, that the case is definitely one of carcinoma. I will not reopen the argument as to the relative merits of various steps and procedures in arriving at the diagnosis.

Suffice it to say that after more than twenty-five years of actual practical experience and careful observation, I feel no woman should be denied prompt and proper treatment for uterine carcinoma, if the clinical findings indicate it, regardless of a negative biopsy. As I look back over the past both recent as well as distant, too many sad experiences have been encountered, where a negative biopsy lulled the patient and doctor into a sense of security, only to be aroused when it was too late. It must be remembered that interpretation of tissue as viewed through the microscope, is the expression of an opinion and an opinion of an infinitesimal portion of the diseased area and not a statement of a positive fact.

The clinical findings are likewise opinions, but are backed by the whole picture deliberately studied rather than a fleeting view of a small part of the picture. The doctor undertaking the treatment of such a serious condition as uterine carcinoma, and who feels that his opinions are of no decisive value after examining the case and that he must wait for a telephone call from the laboratory before advising his patient, should take time out and better prepare himself for the job.

Those interested in the cure of patients rather than the writing of would be scientific essays, feel assured by a positive biopsy report, but are not deterred by a negative one, if their experience teaches them it should be the opposite.

SELECTION OF PATIENTS

In the selection and classification of patients, they are divided into two groups: First, those in whom it is hoped to effect a cure; second, those in whom only palliation can be expected.

In the first group are many in whom the disease has advanced far into the parametrial tissues. These, as well as those yet confined to the cervix and within the uterine body, should receive the maximum radiation from which the normal tissues in that area will recover. We feel that in the treatment of uterine carcinoma, there is but one dose and that is the maximum. The treacherous practice of scaling down the

dosage of radiation according to mythical grades, has resulted in the loss of many patients who might have been saved had dosage been given to the limit of normal tissue recovery. There are carcinoma cells that are more resistant to radiation than normal cells and necessarily cannot be sterilized by radiation, yet many patients with so-called adenocarcinoma yield nicely to radiation. On the other hand cases classified as radiosensitive, refuse to subside under most intensive radiation.

In the light of present knowledge, pelvic carcinoma is carcinoma and calls for the maximum dosage that can be safely administered, where we are working for a cure. The future may show the problem to be more simple.

In the second classification of patients, those in whom only palliation can be expected, the problem and plan is entirely different. Some of these reach us in a hopeless stage, who have never received treatment, some badly or overtreated. The unfortunate who has advanced carcinoma and has never received treatment, may be greatly relieved, made more comfortable and life prolonged by gentle radiation applications, relieving her of hemorrhage and sepsis. By roentgen ray radiation, painful metastatic foci may be controlled and fractured bones prevented. The unfortunate victim of repeated heavy radium dosage to the uterus with a large cratered sloughing cavity, may be spared sudden death by hemorrhage or slow septic death, by careful non-depressing dosage of roentgen ray radiation. Repeated radium applications in these cases only aggravate the trouble, whereas the judicious use of roentgen ray radiation will palliate all and in some instances, produce cures.

PREPARATION OF PATIENT

The second step, the preparation of the patient for radiation treatment, may determine the final result. To rush a patient into the hospital for a radium application immediately after its use is determined upon, is as hazardous as doing a laparotomy with no preparation of the patient. Radium applied to a septic, sloughing cervix, frequently fails where the same treatment may succeed, if given after the local area has been properly cleaned up and the patient otherwise prepared to withstand the reaction and resulting absorption of septic material following the radium application.

In recent years the attention of the profession has been called to the effect of roentgen ray on inflammatory infective processes. This effect results in deep tissue, as well as surface and near surface infections. By the proper application of roentgen ray radiation without, over a period of three or four weeks, a cervix highly inflamed, engorged and saturated with infective secretion, will most generally contract, de-congest and free itself of infection, the ideal condition for proper radium application.

TECHNIC OF RADIUM APPLICATION

And this brings us to the third step, the actual technic of the radiation. The correct technic in the treatment of uterine carcinoma, is that technic which delivers to all suspected carcinoma areas, an amount of radiation lethal to the carcinoma cell and short of lethal effect on pelvic tissue necessary to be conserved. In order to do this, the combined use of radium and roentgen rays is necessary. The ideal is a combination of these agents in such a way that all areas receive the same amount of radiation. This ideal is never accomplished because of the difference in absorption of radium and roentgen rays by the tissues. However, it can be approached by applying roentgen rays through the proper number of ports externally and radium from within, in properly graduated dosage.

There are many curves, twists and figures today, purporting as guides to make the administration of radiation easy and accurate in uterine carcinoma; some of them so persuasive that many radiologists swallow them with one gulp, forgetting that different patients and different apparatus are rarely duplicated in practice.

Clinical observation has taught us that roentgen ray radiation in divided doses, through several ports, may be built up to an amount sufficient to kill carcinoma cells with little damage to normal tissue through which it has to pass, though these cells lie considerable distance beneath the surface. It is easy to kill carcinoma cells with radium radiation, that lie close to the point at which radium is applied, such as the uterine canal or cervix, but it is the cells which lie distant from these points that determine the ultimate outcome of the case and which must be sterilized for permanent cure.

Viewing the problem from a common sense standpoint, years ago it was realized that success in curing uterine carcinoma depended upon killing those cells wandering out and away from the original focus and that their death should be the first step. As a result, roentgen rays were used intensively through multiple ports in an attempt to kill these cells, reserving the use of radium for the primary focus, after sufficient roentgen ray radiation had been applied. This, it is believed, is the correct plan and the correct technic I have attempted to show in the following charts.

Over a period of four or five weeks, 10 to 12,000 r are administered by weekly doses. Following this, there will be found a comparatively aseptic cervix, engorgement reduced, cervical tissue retracted and little ulceration where formerly it was extensive. In some of the more sensitive types, this is all that is necessary.

In the majority of patients following the roentgen ray radiation, radium should be applied, adding to the roentgen ray radiation to bring the total dosage throughout the pelvis to the maximum amount.

Chart 1 shows that the dose at 10 cm. depth, is 36 per cent and 5 cm. laterally from this point each way, it is 30 per cent, only a loss of 6 per cent. A beam passing through the pelvis, thus varies only 6 per cent, 5 cm. in each direction from its central point.

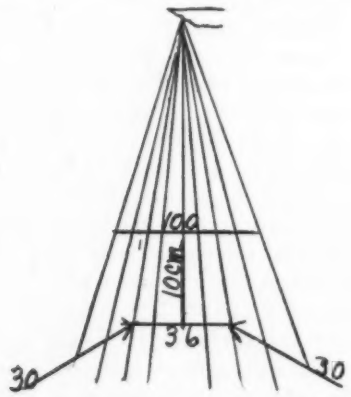

CHART 1

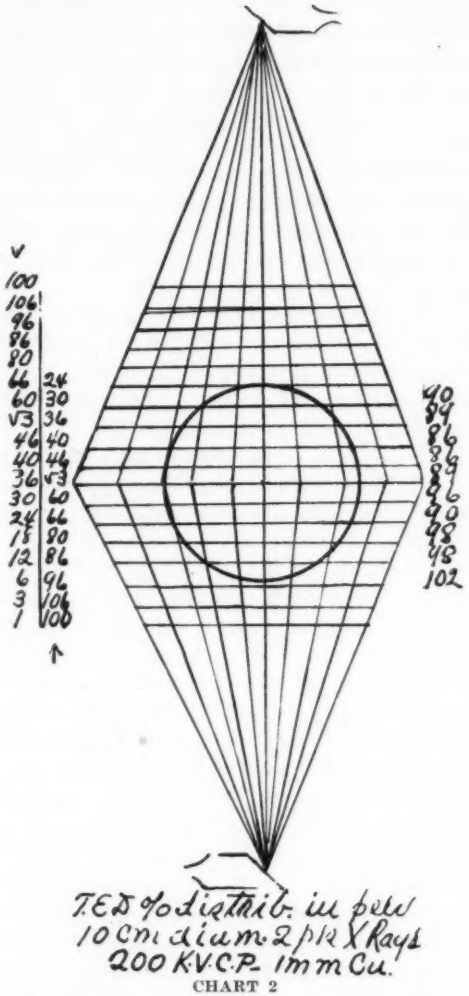

CHART 2

Chart 2 illustrates the percentage amount of T. E. dosage which reaches various centimeter levels in the pelvis over a 10 cm. radius distance, giving two ports.

Chart 3 shows the total roentgen ray dosage distributed throughout the pelvis 5 cm. from the cervix in all directions, using four ports, (column 4) a full treatment. I have found that the average skin will stand this dose once every seven days for five applications, (column 5.) In this time, 30 days, I will have applied 20 T. E. doses and the percentage of different centimeter levels is indicated in column 5. Now, if 1200 mg. hours of radium is applied in the cervix, the additional T. E. dosage as indicated by the circle on the right of Chart 3,

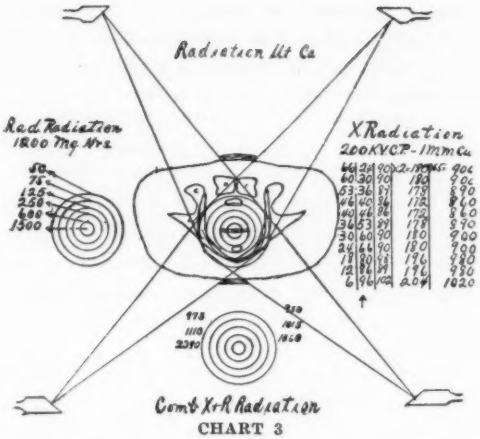

CHART 3

will be added to the roentgen ray T. E. dosage, making a total of approximately 10 to 20 T. E. doses throughout the pelvis as indicated by the centimeter circles in the lower part of Chart 3.

By this technic, we get not a uniform distribution of radiation, but sufficient dosage at all points, except for the highly resistant types. In many cases we may further add to radium dosage with impunity, as I already have by the above dosage, a necrosing dose in the cervix, and added dosage does no harm, but builds up the amounts distant from the cervix, which may need increasing.

SUMMARY

A full T. E. D. is applied to each of four ports, approximately forty-five degrees. Radiation is thus distributed throughout the pelvis by each beam. These four applications are given in two days, frequently in one day, and this is called a series. This series is repeated each seven days until five are given, consuming about thirty days in all, then radium application is made, using from 1200 to 7200 mg. hours, according to conditions then existing.

In many old women and in radiosensitive cases, the five roentgen ray series are all that are needed. In the majority, radium is necessary, and in cervical cases the applicator should be placed so as to reach the lower segments of the uterus and other applicators against the vaginal portion of the cervix.

The roentgen ray dosage in uterine carcinoma may be divided, using smaller dosage frequently applied, until the required amount is administered, after the theory of Freund and the practice of Coutard. This is time consuming and expensive, and in practice I have not been satisfied that it shows any better results than the plan described and which I routinely follow.

DISCUSSION

Dr. Stakely Hatchette (Lake Charles): There is only one thing I would like to emphasize. Large doses of radiation are necessary in treating carcinomas of the uterus and cervix; half-way measures cannot be used.

In some cases where surgery is contemplated a few surgeons are opposed to radiation because of its resultant fibrosis causing increased difficulty of operation. But I believe that any really good surgeon would gladly accept the increased difficulty of operation in order to assure a better prognosis for his patient.

Dr. C. P. Rutledge (Shreveport): I wish to congratulate Dr. Barrow on the thoroughness of his radiation technic. We do not all agree in technic but I think we all agree that we should get in as much dosage as we can without destruction of the healthy organisms or tissue around the growth. A point to be made is that quite a few of these patients can be cured by roentgen ray radiation alone. Some men are strong advocates of this procedure. Many cases require both types of radiation, roentgen ray and radium, but in these cases, I think it is wise always to precede the introduction of radium with sufficient dosage of deep roentgen ray therapy. You get cases of old cauliflower growths of the cervix that, when upon opening the vagina, the blood gushes out and you feel that nothing can be done, but you are wrong, because a lot of such cases have been cured. Some of these cauliflower growths show very great radiosensitivity.

I had a patient referred to me by a doctor seven or eight years ago. The doctor said he felt that I could not do anything for her but I just wanted to see. This was a case sent by an internist. I found a very radiosensitive tumor. She was given deep roentgen ray therapy and the growth melted away like snow in the sunshine. In three weeks' time it was not recognizable. In six weeks' time I gave intercervical radium treatment. The patient was sixty-five years old. You and no one else can now tell that she had had a lesion. These cases are not all hopeless. Certain technic in the hands of some men capable of using it, will give marked relief.

Dr. S. C. Barrow (In conclusion): In the treatment of pelvic carcinoma, both roentgen rays and radium are used. Their action is the same and the technic which will be effective is the one which approaches a uniform distribution of radiation in proper amount throughout the pelvis.

The practice of relying upon biopsies solely for a diagnosis is dangerous.

The practice of scaling down or up dosage, according to a supposed degree of malignancy, is likewise dangerous. If the patient has carcinoma, give the maximum dosage from which the normal tissues will recover. In this way many patients will get well, who otherwise will likely have recurrences.

In radiation treatment of pelvic carcinoma, one must not be afraid, but have courage enough to give the proper radiation despite temporary discomfort to the patient.

THE TREATMENT BY ROENTGEN RAY OF CONDITIONS OTHER THAN CANCER: THE MANNER OF APPLICATION*

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In presenting this paper it is not my intention or claim to present new methods of irradiation or treatment, but I hope to call your attention to the great value of irradiation in many conditions, some of which are refractory to other methods of treatment and which in my experience in many instances respond well to irradiation.

Although some uncertainty still surrounds the action of roentgen or radium rays on inflammatory lesions, the weight of experimental and clinical evidence indicates that the first and major effect of the rays is destruction of some of the infiltrating leukocytes, especially the lymphocytes which have long been known as the most radiosensitive of all cells. Moreover, the destruction of infiltrating lymphocytes which occurs, or at least begins, soon after irradiation probably serves to liberate the antibodies, ferments and other protective substances contained by these cells and to make these substances more available for defense than they were in the intact cells. Destruction of infiltrating leukocytes, also, undoubtedly tends to increase phagocytosis. In favor of this view is the fact that the rate of improvement, including relief from pain, which follows irradiation of acute inflammatory lesions agrees closely with the rate of leukocytic destruction induced in animals and human beings by experimental exposure to roentgen rays. Another significant fact is that favorable results require only small doses—doses too small to have an appreciable effect on other cells.

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SENSITIVITY OF CERTAIN TISSUES

I will name some of the tissues of the body in the order of their sensitivity to irradiation as follows: Lymphocytes, leukocytes, ovaries, testicles, spleen, lymphatic tissues, bone marrow, thymus, thyroid, hair papillae, sweat glands, sebaceous glands, mucous membrane, skin, visceral organs, connective tissue, bone, nerves and fat.

The skin is about three times more resistant to irradiation and fat, twenty times more resistant than the lymphocytes and leukocytes which mass and react to inflammation. Therefore one-third erythema may be given to destroy them and disseminate their immune bodies and the skin and fat remain intact. Age and anemia decrease sensitivity. Heat and blood supply increase sensitivity.

It has been my practice in certain chronic inflammations of the pelvis and joints first to give diathermy to produce engorgement, and immediately administer irradiation. Practically all forms of inflammation respond favorably to a greater or less degree to irradiation. The acute forms which mass lymphocytes and leukocytes into localized regions respond best, and the chronic forms which form granuloma or fungoid growth respond best. Since children react to inflammation with lymphocytosis, they respond more quickly, especially around the head and neck. Sinusitis, mastoiditis, otitis media, and tonsillitis will respond readily to proper roentgenotherapy. Adults respond also, but less readily.

DOSAGE IN SPECIFIC CONDITIONS

In most inflammations low voltage, 100 kv. with ¼ Cu 1A1, is sufficient if not superior to higher voltage. The factors in sinusitis are: 140 kv. ¼ Cu 1A1, 50 cm. dist. 105 r's over front—repeated in two days on right and in two more days on left. If associated with bronchitis 105 r's over mediastinal chest. The same dose is then repeated in the same manner, the eyes being protected by lead shields. One hundred and fifty to 210 r's should be given in case of mastoiditis or otitis media according to age of patient and severity

of condition. Eustachian tubes and catarrhal deafness may be treated by giving 90 r's over each side at weekly intervals. With advent of dry throat the dose should be reduced to 60 r's on each side.

A suppurating ear usually dries with 150 r's to 210 r's repeated once or twice at weekly intervals, in children 90 r's. If these doses are repeated the number of r's would be reduced so that an erythema would not be approached.

There is nothing better to rid the throat and pharynx of scattered adenoid and lymphoid tissue, little patches too small for surgery. The chronic hoarse, raucous voice, which is so harsh and such a nuisance to the audience or hearer, can be relieved in the majority of instances with moderate irradiation.

Pelvic inflammations in adults respond well to 150 to 210 r's. Higher voltage and filtration may be used especially if r's are reduced so as not to approach an erythema. Excellent results are obtained in postoperative suppurating wounds with prompt healing. In young women one must not forget the ovaries and not over 150 to 210 r's should reach the ovaries unless sterilization is wanted or desired as sometimes is the case in older women.

If you have never tried roentgen rays in thrombophlebitis you have a treat in store. Severe pain is promptly relieved with moderate dosage and swelling gradually subsides.

Gas gangrene is treated with 100 kv., 5 Ma., distance depending on size of field to cover, giving 100 r's daily until symptoms subside but do not exceed an erythema and give some protection if possible to exposed bones, especially in case of repeated doses. If there is not protection the bone will turn dark. In gas gangrene irradiation of the fluid exudate and gases is said to produce hydrogen peroxide or nascent oxygen which prevents the growth of the anerobic gas bacillus. This oxygen is soon dissipated. Therefore irradiation is repeated daily in small doses.

Many other inflammatory conditions as carbuncles, furuncles, acute mastoiditis or prostatitis are treated in somewhat the same manner. The allergies as hay fever, vernal conjunctivitis and asthma are relieved by small doses repeated.

Erysipelas should be treated with about 100 kv., 1 or 3 mm. Al filter, distance depending on area treated. A wide area should be treated for two reasons. The condition spreads and in streptococcic inflammation there is not so much leukocytic infiltration and a wider area of hyperemic blood supply must be irradiated to throw sufficient immune bodies at the infection. The treatment is very effective but should be repeated if necessary.

Excessive granulation tissue (commonly known as proud flesh) melts away rapidly with suberythema doses of low voltage and lightly filtered rays. Paronychia is probably best treated in the following manner: 68 kv., 3 Ma., 34 cm. dist., unfiltered 60 r's at weekly intervals for four treatments then at two week intervals for four treatments.

Eczema, especially allergic eczema, and pruritus ani and vulvae, are best treated with low voltage unfiltered rays giving moderate doses at weekly or biweekly intervals until the condition subsides. The cases may recur and require further treatment if the etiologic factor is not removed. Factors: 86 kv., 3 Ma., 25 cm. distance, unfiltered 2 min., 120 r's.

Acne is treated in the following manner: 86 kv., 3 Ma., 25 cm. dist. 1 min., unfiltered, 60 r's, 3 views face, repeated at weekly intervals to make a total of 4 treatments, then at two week intervals preferably for only two to four more treatments. Diet and hygienic instructions are also given. The younger the individual, the shorter should the course be.

Other skin conditions responding well to irradiation are: Tinea, sycosis vulgaris, bromidrosis, keloid, favus of scalp, allergic dermatitis, fungus infections and many others. Tuberculosis, extra pulmonary tuberculosis, is probably best treated with a suberythema dose of filtered rays repeated in two weeks.

The leukemias and Hodgkin's disease are treated over the involved glands and spleen with moderate voltage and dosage keeping the disease under control with no attempt to cure for such is not possible; but the patient's life may be prolonged and made more comfortable, therefore he should not be burdened with excessive treatment. The amount and frequency of treatments depend on blood count and glandular and spleen enlargement. It is not

necessary to keep high blood counts in leukemia lower than 20,000. If there are widespread skin lesions in Hodgkin's disease or the leukemias then give panteleroentgenotherapy—about 50 r's over large areas from a distance is sufficient if repeated.

Actinomycosis requires heavy doses, the total of which is about one-half the lethal dose for cancer. Be sure that the whole field is covered, even if it must be divided into several fields. Give each field 200 to 250 r's daily with high voltage, filtered rays, until a reaction is obtained. The dose is usually repeated in six weeks; a total of 1,500 to 3,000 r's being given to each field. Factors: 200 kv., ¾ Cu 1A1, 50 cm. dist. Potassium iodide should also be given. For that reason the skin erythema will be reached earlier than in treating cancer similarly.

In treating hyperthyroidism the following factors may be used; 200 kv., ¾ Cu 1A1, 50 cm. distance, 150 r's over each side of neck. This is to get rid of any inflammatory lymphocytic infiltration. Wait two or three days then give 250 r's daily to each side of neck not to exceed 650 R's to each field. Then direct 450 r's at one sitting with a 10 x 10 field caudally down through substernal region over thymus. Treatment should not be repeated for six weeks.

Uterine hemorrhage without demonstrable pathology: Women above 40 can be controlled with the following factors: 200 kv., ¾ Cu 1A1, 50 cm. distance, 480 r's over 20 cm. field both front and back given on 2 successive days or divided into four treatments depending on anemia of patients and other conditions. It is probably more safe in these conditions to do a diagnostic curettage and place 59 mgm. of filtered radium in uterus for 20 to 24 hours followed with one 20 cm. field of x-rays anteriorly, giving 450 r's.

Young women should not receive over 250 r's delivered to the ovaries which would be from 500 to 750 r's delivered externally depending on how thin the subject is. Other means of controlling the hemorrhage probably should first be tried as small doses over the spleen with only 250 to 350 r's externally over lower abdomen.

The pain and swelling in gonorrheal arthritis are quickly abated. The results are spectacular.

Recently I have treated two cases of pneumonia with one-third of lower lobe involved in x-ray film with the following factors: 140 kv., 20 Ma., 50 cm., ¼ Cu 1A1, 15 x 15 field, 150 r's. The temperature was normal in 18 hours in one case and 36 hours in the other case. These doses may be repeated the following day if necessary.

CONCLUSIONS

1. Irradiation is beneficial in most inflammatory conditions and in more than 50 per cent of the lesions of the skin.
2. For success the dose should be small except in tuberculosis and actinomycosis.
3. Irradiation if properly applied is not harmful in any inflammatory condition.

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DISCUSSION

Dr. Stakeley Hatchette (Lake Charles): There are three other conditions I would like to call attention to which may also be successfully treated with roentgen ray. One of them is early selected cases of pulmonary tuberculosis. I have been giving small doses, rather highly filtered, and I have been successful in obtaining fibrotic changes in the lungs in the area of treatment. These fibrotic changes in the areas of infection seem to have stopped the spread of the disease very well for me.

Another condition that I have been treating in the past (I reported a series of 16 cases three years ago in the New Orleans Medical and Surgical Journal) is hay fever. Of those cases treated, approximately 50 per cent are still free of symptoms. I think that the roentgen rays possibly accomplished a desensitization of the mucosa in the nose and nasopharynx.

The third condition is calcified bursae. I use heavy filtration on these cases and give fairly large doses twice a week. In three instances I have been able to get a partial to complete disappearance of the shadow of the bursa. I have four

other cases under treatment right now and all are improved or free of symptoms depending on the number of treatments they have received.

Dr. S. C. Barrow (Shreveport): The first thought today in the minds of the profession generally concerning radiology, is malignancy. I am glad that Dr. Barker has brought the question of non-malignancy to your attention. He has explained to you in the beginning of his remarks, I think very scientifically, how the results are gotten. It is a common experience of the profession to have observed in the past that there has been too much radical surgery done in sinusitis. The demonstration here today shows you, in acute cases, what can be done to prevent chronicity later. My experience has been in this work most gratifying along the line of ear troubles. I have seen mastoid cases ordered to the hospital for operation, relieved by radiation. In these recurring abscesses in the middle ear that later go on into mastoiditis, the results in many cases are just what we would like for them to be. In any condition where there is an inflammatory element there is indication for radiation. In some of our compensation cases radiation is being used in lame backs, where no real fractures are present, and even in the presence of fractures there is an inflammatory reaction, which subsides under proper radiation. Not in malignancy alone but in the treatment of cases with an inflammatory basis, should radiation be used.

Dr. D. C. McBride (Alexandria): It seems that radiation therapy has proved to be the rock on the weary land for the weary man. Dr. Barker convinced the profession at Alexandria of the value of radiation therapy in the treatment of many conditions. I would just like to cite one case, seemingly of little value but the case proved to me of extreme value. It is one of puerperal infection which fell into my hands. I tried the usual methods for such cases, blood transfusions and so forth. My patient gradually was passing on. I talked with Dr. Barker about the case and he suggested that we try radiation. The results were marvelous. The patient's temperature lowered and the chills ceased. She began to eat more and picked up and it was not long before the infection was at such a point that we were able to drain the abscess and the patient recovered. I later heard that she had another baby after radiation was given.

Dr. C. P. Rutledge (Shreveport): I would like to congratulate Dr. Barker on his presentation and urge men who are treating such conditions not to wait, as has been the practice in the past, until they have used every method known in surgery or medicine and as a last resort turn to roentgen ray. So many patients come to us after everything else has been used and then we are expected to get miraculous results. As a general rule in these cases, my experience has been that we get our best results when the patients are referred early. This is especially true in carbuncles and furuncles. In carbuncles in a diabetic, I have never received beneficial results. I will continue hoping that one will heal with roentgen ray therapy. Most carbuncles in diabetics are best treated other ways. My experience has been most unhappy in this regard.

Dr. H. O. Barker (In conclusion): I do not want to add anything more except to thank the doctors who have discussed this paper and also to state that I left out some of the paper on purpose because it was too long; there will be other conditions that you will find enumerated in the paper regarding technic used.

I wish to stress again that in inflammatory conditions, small doses are needed and you do not have to give a large dose in any inflammatory condition except actinomycosis and pulmonary tuberculosis.

PRIMARY OVARIAN PREGNANCY

CASE REPORT

JULIUS E. ISAACSON, M. D.

NEW ORLEANS

Primary ovarian pregnancy is recognized as one of the rarest forms of ectopic gestation. Reported by Maurice, as early as 1682, authorities through two centuries continued to doubt the occurrence of true cases of this condition. The details of cases described differed so much that Spiegelberg in 1878 formulated four criteria, all of which must be fulfilled beyond the possibility of doubt before the fact of an ovarian pregnancy could be established. These conditions are: (1) The tube (on the same side) must be intact (grossly and microscopically): (2) the fetal sac must occupy the position of the ovary; (3) it must be connected with the ovary by the utero-ovarian ligament; (4) ovarian tissue must be found in the sac. To the fourth condition was later added the stipulation that the tissue must be found in the sac at several places, some distance apart.

In 1899, however, Van Tussenbroek furnished strong proof which was corroborated in 1902 by Thompson that primary ovarian pregnancy, fulfilling all the criteria set down, did occur at rare intervals. In 1909, Norris reported 19 cases, fully proved, with an additional one of his own. Eight years later, after a careful examination of evidence on cases re-

*Full charts, progress notes and pathologic reports are in the hands of the author.

ported during 1909-17, 22 more cases were accepted as genuine pregnancies of primary ovarian origin, bringing the total to 42. Subsequently 43 additional cases have been reported, bringing the number of cases, noted in the literature available, to 85.

CASE REPORT

The patient was a white woman, 29 years of age, who had one child eleven years old. She was admitted to Hotel Dieu in a state of extreme shock; she was pallid and complained of severe pain in the lower pelvis. Her pulse count was 160-180 and was almost imperceptible.

Menstruation had last occurred six months previously. Upon vaginal examination, a viable fetus could be felt in the posterior cul-de-sac. Marked contractions of the uterus were present and the cervix uteri could not be seen. By use of a bivalve speculum, it could be felt under the symphysis of the pubis. The uterus was markedly retroflexed and fixed in the pelvis. Severe pain under the left scapula was attributed to copious intra-abdominal hemorrhage. Blood pressure and urinalysis were reported as normal. Dr. J. T. Nix, called in consultation, confirmed the tentative diagnosis of threatened abortion, and every effort was made to prevent this if possible. The blood showed total white cells, 14,000; red blood cells 2,740,000 and hemoglobin 45 per cent.

Following a night's rest, the patient felt better. Her blood showed 18,750 white cells, with 83 segmented cells. Five hours later, however, the abdomen again became distended and the patient complained of severe pain in the lower pelvis. Suspecting the rupture of some viscus in the abdomen, laparotomy was deemed advisable.

After infusions, the patient was placed in the Trendelenburg position and under gas anesthesia, a midline incision was made from the pubis to the umbilicus. Upon opening the peritoneal cavity, a quantity of free blood could be seen. Thorough examination of the right lower pelvis proved negative. The upper abdomen was walled off with warm five-yard, saline packs; suction apparatus was employed for the removal of fluid and on the left side, deep in the pelvis, blood was found to be freely exuding. A five or six months' fetus was removed, which lived for five minutes after delivery, then expired. The head had been deeply impacted in the pelvis. The tube on this side could easily be seen, and was entirely free from involvement. The ovary was found to be ruptured and a placenta the size of a man's hand was freed from the body of the uterus and from the left posterior cul-de-sac, from which the blood supply had evidently been derived for the nourishment of the large fetus. The entire area was thoroughly cleansed, all bleeding points were carefully sutured, and after the removal of most of the clots, a small amount of the free blood in the cavity was left in situ. The abdomen was closed in the usual manner, using chronic catgut for subcutaneous sutures and silk worm gut for the skin. The patient left the table in fair condition.

About four hours following the operation, the patient developed a severe bronchorrhea, which improved after treatment with a mustard poultice, atropine and digitalis. Gastric lavage every three hours was productive of brownish green mucus through the tube. An indirect transfusion of 500 c.c. of citrated blood was followed by a severe chill; temperature 105°, falling gradually. Prostigmin was administered to stimulate normal peristalsis. The restlessness subsided by the following day and the patient was given gruel and warm drinks. Twenty-four hours later a second transfusion of 500 c.c. of citrated blood was given, which produced no reaction. Temperature 103.6°; pulse 160. The patient's general condition was less favorable. Cardiac stimulants and 10 per cent glucose infusions were instituted, and some improvement ensued. The following day found the patient very restless. The abdomen was flaccid and the temperature was rising. Death occurred suddenly in the late afternoon. No autopsy was allowed. The cause of death was judged to be cardiac dilatation and acute tubular nephritis, contributing to a ruptured ectopic pregnancy of six months' duration, hemorrhage and shock.

Fig. 1. Photograph of Specimen.

Pathologic report: The specimen consists of a female fetus, having a crown-heel measurement of 35 cm. The head is markedly compressed and bulges downward. There is a small lacerated area in the region of the anterior angle on the left side. The left hand is distorted, otherwise the gross examination of the body showed nothing remark-

able. Many large masses of ragged tissue, red in color, and granular in appearance, can be seen, mixed with a few large shreds of thin smooth membrane, apparently placenta. The pathologic diagnosis is ectopic (intra-abdominal) pregnancy. Placental tissue shows hyalinization and interstitial hemorrhage in many areas.

CAUSE OF OVARIAN PREGNANCY

Primary ovarian pregnancy is said to occur when fecundation of an ovum takes place while it is still confined within the graafian follicle. Caturani believes that the condition results from ovarian inflammation, especially periovaritis. The duration of ovarian pregnancy may be longer than that of other types of extra-uterine gestation, because of the different nature of the tissues which surround the embryonal sac. According to Norris, the gestation may terminate in one of three ways: (1) Rupture into the peritoneal cavity with hemorrhage and death of the fetus; (2) rupture of the sac, with secondary ovario-abdominal pregnancy; the placenta remains attached to the ovarian parenchyma; (3) rupture with secondary attachment of the ovum and abdominal pregnancy secondary to primary ovarian gestation.

Ovariotomy is the treatment of choice, with the removal of the tube in most cases. It is thought that some ovarian pregnancies go on to the formation of a lithopedion, when a dead fetus becomes in time more or less completely calcified. Preoperative and postoperative care are essentially the same as in other cases of ectopic gestation.

SUMMARY

1. A case of ruptured ovario-abdominal pregnancy is presented.

2. Vaginal findings revealed a markedly retracted cervix, high under the symphysis, with severe tetanic pains and fetal movements. Severe shoulder pain and tenderness over the uterus indicated intraperitoneal hemorrhage.

3. Preoperative differential diagnosis was uncertain.

4. Ovariotomy was performed with removal of the tube and the entire placenta, which had no attachment to bowel or omentum.

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THE PATHOLOGY OF CERTAIN UNUSUAL OVARIAN TUMORS*

HERBERT J. SCHATTENBERG, M. D.†

NEW ORLEANS

Within recent years, due to a better understanding of the embryologic development and histology of the ovary, certain tumors have come to be recognized which heretofore, in many instances, have been incorrectly diagnosed. This discussion will be limited to those tumors whose origin is closely related to embryologic anomalies in the development of the ovary.

At an early stage and until the embryo is 14 mm. in length, it is impossible to differentiate the gonadal structures from a sexual standpoint. Histologic elements are present which possess the potentialities of being converted either into testes or ovaries and the various appendages that go with these. Should the chromosomes decide sex in favor of a female then the sex gland becomes an ovary and the histologic structures present with testicular possibilities should undergo atrophy and disappear. This atrophy or retrogression of male elements does not occur, however, in every instance as it should and this is the explanation offered for

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the occurrence of the arrhenoblastoma of the ovary. This is one of the tumors under discussion and results, as shown by Meyer[1], from embryonic testicular remnants, consisting of tubules or Leydig cells in the ovary. Furthermore, the sex gland may contain cellular elements which are undifferentiated and develop in neither direction, male or female. In other words the cells are disgerminal and give rise to what is called a disgerminoma. The peculiarities of this tumor are well described by Geist.[2] The third type of tumor to be discussed also springs from undifferentiated cells which primarily belong to some other part of the urinary system as lining epithelial cells. They have become dislocated and are found as "cell-rests" in the ovary, the so-called Walthard cell nests which are the forerunners of Brenner's tumor (Brenner,[3] Smith,[4] Schiller[5]). The fourth type of ovarian neoplasm under discussion is the granulosa cell tumor. This arises from some of the ovary's own granulosa cell nests which embryologically may be considered defective. This histogenesis of this neoplasm is well discussed by Te Linde[6] and Novak.[7]

TYPES OF OVARIAN TUMORS

This then in a very brief way gives the histogenesis of the four interesting and unusual types of ovarian tumors, namely: (1) arrhenoblastoma, (2) disgerminoma, (3) Brenner's tumor, and (4) granulosa cell tumor. A short discussion of the main pathologic and clinical features of each follows.

Arrhenoblastoma (arrhenos=male): Pathologically two types may be recognized, one which is poorly differentiated, almost looking like a sarcoma, and may arise from interstitial testicular cells; the other which is well differentiated and mimics tubular formations, also called "adenoma ovarii testiculare" of Pick. Grossly the latter is usually small, firm, round and well encapsulated. The undifferentiated arrhenoblastoma is usually larger, softer, lobulated, yellowish and shows areas of hemorrhage or necrosis. Clinically, the arrhenoblastoma because of liberating a testicular hormone, testosterone, is very interesting. The woman becomes masculine, i. e. grows a beard, becomes muscular and stocky, develops a male voice, may not be interested in opposite sex, develops hypertrophy of the clitoris almost the size of a penis and stops menstruating. When the tumor is removed the patient again becomes feminine, starts to menstruate, may again be interested in the opposite sex, and may even become pregnant. Only a fair percentage of arrhenoblastomas examined have been reported malignant. Clinically only one third of the cases of "adenoma ovarii testiculare" show signs of masculinization. This type is relatively benign.

Disgerminoma: This tumor has been called seminoma ovarii due to its close resemblance to the so-called seminoma of the testis. The patient is usually young and the tumor is common in pseudohermaphrodites, cryptorchids and those with poorly developed gonads. Pathologically, the tumors may be of enormous size, are peculiarly kidney shaped, solid, though doughy in consistency, and often show areas of hemorrhage and necrosis. Clinically these patients show no signs of feminization or masculinization since no hormones are liberated by the tumor cell. The tumor is bilateral in 20 per cent of cases. The prognosis is good if the tumor is removed early.

Brenner's Tumor: This neoplasm was first described by Brenner in 1907 as oophoroma folliculare. Clinically it is benign, almost invariably unilateral and 50 per cent of the cases reported are in women over 50 years of age. Usually the tumors are small but may be as much as 25 cm. in diameter. Pathologically two types, A and B, are recognized. The former is of a stony hardness and without gross cystic formations. The latter tumor is definitely associated with cystic formations. Histologically Brenner's tumor is characterized by epithelial cell nests, cystic areas, and an abundance of connective tissue which often shows areas of hyaline degeneration and calcification. The cysts often are lined by columnar pseudomucinous epithelium.

Granulosa Cell Tumor: This is the most common and best known tumor of the group under discussion. It was first described by V. Kahlden as "adenoma of the graafian follicle." These tumors occur at any age, but more often during active reproductive life and in 10 per cent of cases are bilateral. They also constitute 10 per cent of all primary neoplasms of the

ovary. The tumor cells produce a large amount of estrogenic hormone which in old women causes a re-establishment of menstruation. When such a tumor develops in a child the hormonic effects is pronounced and there is noted precocious puberty, breast development, premature menstruation, early growth of genital hair and an accelerated skeletal growth. These clinical criteria disappear when the tumor is removed, due to loss of estrin.

Pathologically two distinct types of granulosa cell tumors are recognized, the folliculoid and cylindroid types. They vary in size from 5 mm. in diameter, to masses as large as an adult head, usually of soft consistency, encapsulated and of a light yellowish color. Due to the action of estrin the endometrium is usually thickened and hyperplastic. When unilateral these tumors are usually benign, when bilateral usually malignant.

SUMMARY

(1) A short discussion has been given of a group of primary ovarian tumors which can be traced to embryological defects and which in many instances in the past have been incorrectly diagnosed as fibroma, carcinoma or sarcoma.

(2) The disgerminoma and Brenner's tumor are without hormonal effects. The arrhenoblastoma and granulosa cell tumors produce specific endocrine substances, the former causing thereby masculinization while the latter causes feminization.

(3) Endometrial hyperplasia in case of granulosa cell tumor is due to estrin production. When associated with uterine bleeding in a woman past the menopause this tumor should be suspicioned.

(4) Adrenal "cell-rests" (hypernephroma) of the ovary are not altogether uncommon and the clinical features parallel those of arrhenoblastoma. Histopathologic examination differentiates the two.

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AN IMPORTANT MEETING

There will be held in Washington, D. C., the middle of July, a meeting which should be of extreme importance to the medical profession. This meeting is called by Miss Josephine Roche as Chairman of the Interdepartmental Committee to Coordinate Health and Welfare Activities of the Federal Government. Its purpose superficially is an excellent one, namely to weave together the various departments in the Federal Government which have to do with the care of the sick and the health of the nation as a whole. The real intent of the Committee should be to avoid duplication of effort and work in the different Federal departments to which various phases of the health of the nation have been delegated.

While superficially the purposes of the meeting are excellent, there is grave fear in the minds of many thinking physicians who have the best interests of the medical profession at heart, that the purpose of the meeting is not so much to carry out its suggested purposes but rather to turn the meeting into a means of establishing State Medicine. In other words, it may be the first gun of a sincere effort to organize and institute State Medicine. The American Medical Association will have certain important representatives in attendance but there have been invited also a large group of other individuals whose interest in medicine is peripheral rather than central. They have grand ideas and grandiose schemes for the care of the indigent. They probably will outnumber by far members of organized medicine and will be in a position to put over pretty much anything they wish.

Miss Roche was to have read a paper before the House of Delegates of the American Medical Association. She prepared this paper but was unable to attend and her place was taken by Assistant Surgeon General Draper of the United States Public Health Service. Miss Roche is undoubtedly a woman activated by the highest motives but it is the feeling of many medical men that the recent national health survey of the Public Health Service, upon which she predicated and based most of her statements, does not bring out the true picture of illness and the effect of illness throughout this country. It is very easy to believe that the obvious fact that the lowest income group have more days of disability per capita than do the relatively well to do, but it is not right nor fair to assume that this is due to inadequate

medical care. Rather it would seem more proper to state that improper housing and inadequate food are the responsible factors. Likewise it does not seem that there are twenty millions of people in this country who do not have available hospital facilities. On the contrary the American Medical Association has statistics which show that there are less than two million people in this country who are farther than thirty miles from a hospital where attention would be given to the poor man as well as the well to do. Most of these two million people are in communities where there are as few as five or ten people living in a square mile, in other words in the great vast, poorly inhabited sections of the country. With the excellent good roads that are now existing throughout the United States it will be possible for any person, except the very small percentage of people in the wilds to obtain hospital service in an emergency in a very short time. Furthermore in case of chronic disease it is possible to have hospital care except for a very few instances. Here in Louisiana our state hospitals take care of the difficult and problem cases in very large numbers. Additional facilities are being provided by the state government in the form of hospitals established in different sections of the state other than the extreme north and extreme south. It seems almost unbelievable that a Louisianian cannot get good medical care. He can and does; the state provides it through its hospital service which has been running for many decades.

Because of the necessity of having exact facts, it is of extreme importance that the medical profession cooperate wholeheartedly and conscientiously with the Bureau of Economics of the American Medical Association in collecting the necessary facts which have to do with medical and dental practice, nursing service, medical services arranged through relief agencies and many other data which will give a true picture of medical care in this country. The parish medical societies' secretaries will probably have to bear the brunt of this cooperative effort of organized medicine. It will be a hard job, and time consuming, but it should be done. Many state and county societies have already gone into this survey wholeheartedly. Some of the county societies have acquired part time help to aid the county society secretary. For example, in Birmingham, the Jefferson County Medical Society has appropriated $500 to help defray the expenses necessary to make the survey. If all parish (county) and state societies back up the American Medical Association in this way organized medicine will have definite figures, definite facts and positive information to refute the frequently wild statements of those whose minds are inclined to the regimentation of everything, be it through a Nazi or communistic groove.

ECHOES OF THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The recent meeting of the American Medical Association in San Francisco was characterized by a feeling of good will and good fellowship among the official delegates and the members at large. This is said advisedly in spite of the efforts made by the lay press to suggest that the meeting was held over a volcano and that it was only through the most strenuous efforts of certain members that there was no eruption. This is far from the truth. Everything went along smoothly and equitably. Never has this organization, which represents the great body of medical profession in the United States, been more sure about their point of view and their attitude toward social, economic and scientific questions than it is now.

The new President, Dr. Rock Schleyster of Wisconsin, was elected without opposition. The meetings of the House of Delegates were smooth and without controversy. The scientific program was excellent and the scientific exhibit was splendid.

It is unfortunate that the newspapers seemed to think that there was some schism in the ranks of the medical profession. Such is far from the case. The medical profession realize and appreciate that these are times of change and that social conditions of today are not what they were five years ago. A small minority of membership think that the great bulk of the

socially submerged should be taken care of by more or less direct subsidies from the United States Government or from the state governments. The great majority of the profession, however, feel that they are the ones best qualified to take care of this problem. They do not feel that there has been any real neglect of the people on relief. They realize and appreciate that these people must be helped. The medical profession has always, in this country, stood for honesty and square dealing with the patient, be he rich man or poor. Feeling as they do about the sanctity of their profession, they necessarily feel that one of the gravest mistakes which might be brought about in this country of ours would be the placing over medical men people who are not imbued with the ideas that the medical profession hold sacred. If the management of the medical profession was to be put into the hands of others, and undoubtedly it would be, were socialized medicine so-called to become an accomplished fact, then the profession feels that not only will it suffer but the public as a whole and more particularly the man for whom such social changes were intended.

INVITING THE DOCTOR TO DINNER

A prominent physician in the East recently told the United Parents Association in New York that it would be a good idea to have the family doctor in to dinner from time to time so that the physician would get to know his clients socially as well as professionally. He would thus become acquainted with the background of the family, know something of its morals, its fads and its foibles.

In commenting on this suggestion one of the metropolitan dailies says that the average doctor knows the temperamental foibles of his patients without having to go to their homes to see how they behave. Certainly to quote this authority "He knows better ways to spend his free time." A second very good thought in this particular editorial comment has to do with the money owed to doctors. It says that if most of them were paid all that was due them they would be able to retire but it seems quite likely that the debt may further be put off, or not paid, if the doctor drops in to dinner and credit was not given for a meal that was served. Furthermore, the doctor could expect and anticipate that he would be called upon to give a considerable amount of gratis medical counsel. Many doctors would suspect the dinner invitation to be merely a chance to have the tonsils inspected free or to have an opinion on a proposed operation.

The social relationship between physician and patient is, in many instances, a delightful and pleasant one, but most physicians feel, with the exception of a few congenial friends, that the social and professional side of the practice of medicine should be sharply divorced and separated. The average doctor can find out by inquiry and observation about the family that is under his care without having to feel under obligations for a meal that is served or in debt for some social obligation which he might possibly have accepted merely to avoid hurting the patient's feelings.

NICOTINIC ACID AND PELLAGRA

The recently reported results in the treatment of pellagra with nicotinic acid have fixed attention on the use of this drug. Those who have had the opportunity of administering nicotinic acid to pellagra patients with the active phase of the disease, have been struck by the very prompt relief and amelioration of some of the symptoms at least. For example, the mouth condition and the mucosal involvement of the lower gut yield to the drug with a promptness which is astounding. The mental symptoms are not as quickly affected but the skin lesions are markedly benefitted.

It having been discovered that nicotinic acid is extremely useful in the treatment of pellagra, naturally it followed that the drug should be studied by biochemists, pharmacologists and bacteriologists. A recent paper by Kosher, Dorfman and Saunders[1] on this substance states that evidence seems to show it is a compound of great biologic significance. One bacteriologist, Knight, notes in his studies of Staphylococcus aureus that the combination of nicotinic acid

and vitamin B was effective in taking the place of the yeast concentrate. Neither could work without the other, but when both were applied to the medium the staphylococcus grew beautifully. Another observer noted that nicotinic acid could replace some of the fractions obtained from liver. The present authors find that dysentery bacilli may be cultivated with the use of nicotinic acid and that it is "strikingly effective" even when no other accessory factor is added. They note that this substance can replace gelatin and tissue extract preparations of the spleen and liver.

Those few observations indicate that this drug recently applied to the treatment of pellagra exerts a profound effect on the human organism. The ways and means of doing this have not yet been discovered, but, undoubtedly, new facts and new data will develop in research laboratories which will show why this very common and quite cheap acid is effective in curing or relieving some of the symptoms of pellagra.

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HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

HOTEL DIEU

The regular monthly meeting of the Staff of Hotel Dieu was held in the Nurses' Lecture Room of Hotel Dieu on Monday, May 16, 1938. The meeting was called to order by the President, Dr. A. D. Mouledous, and with the Secretary, Dr. C. E. Gorman, at the desk.

The Scientific Program consisted of: 1. Clinico-pathologic Conference.

The cases presented are interesting more because of the diffuse pathology that each presents and thereby furnishing opportunity for fine points of physical diagnosis. In both cases by careful and minute study it would have been possible to diagnose correctly the pathology found at autopsy. These cases were, really, wonderful samples for teaching.

The first patient was a little girl, aged ten years, whose family history, habits and past health were irrelevant except for repeated attacks of tonsillitis and that she was always more or less frail of stature. Her present illness dates from some vague injury to her back with progressive weakness, marked anemia, painful purpuric spots on finger tips, toes, back and eyelids, edema of face, and sudden exaggeration of symptoms with left hemiplegia. The temperature ranged from 101.2° on admission to 104.2° and was septic in type.

On physical examination there are harsh sounds throughout both lungs. The heart is enlarged and reveals a presystolic, systolic and diastolic murmur at the apex apparently transmited from the aortic area. Abdominal palpation reveals an enlarged liver and moderately enlarged spleen.

The laboratory findings: red blood cells 2,300,000; white blood cells 7,500; hemoglobin 35 per cent; color index .76; marked poikilocytosis, anisocytosis, polychromatophiles and endoglobular degeneration. The blood chemistry and feces were negative. The blood culture showed Streptococcus viridans after 120 hours' incubation. The urine showed albumin, casts and blood cells.

Progress: Admitted April 19, 1938. Condition very bad, abdomen distended, paralysis not improved. She became dyspneic on April 21, 1938; became cyanosed, weak and rapid and shallow pulse which became worse in spite of proper medication and patient expired on April 22, 1938.

Autopsy: The body was pale with numerous large and small purpuric spots on torso, limbs and conjunctiva. Left pupil larger than right. Blood in external auditory canal. Veins of the neck were prominent and hard. Marked emaciation. Both knees ankylosed to 60° flexion. Bilateral ankle edema. The left arm flexed about the elbow and the hand contracted (clawhand). The abdominal cavity: About 400 c.c. clear fluid; omentum surrounds the spleen and firmly adherent; the spleen was bound down to posterior abdominal wall. The thoracic cavity: All organs in nomal position. About 100 c.c. clear fluid in right pleural cavity; none in left. Normal amount of fluid in pericardial cavity and surface smooth. No ante mortem clot in pulmonary artery. Lungs: Evidences of probable bronchopneumonia. The heart weighed 200 grams. Tortuous superficial veins but surface smooth. Right heart chambers and valves negative. Left heart wall showed mural thrombi in auricular appendage and numerous reddish grey and granular vegetations on the mitral valve and on the endocardium immediately above the valve. The aortic valve was normal. The heart wall pale, soft and flabby. The liver not enlarged, buff color with red margins to lobules and the tissue soft and greasy. The gallbladder is negative. The spleen is enlarged and adherent by old and recent adhesions to omentum and abdominal wall. The outer surface shows numerous large reddish blue, yellow and white infarcts occupying more than one-half of the spleen. The infarcts are mostly soft. The kidneys show several typical wedge-shaped infarcts, some dark red and others mostly

soft and white in color. The kidneys are otherwise congested. The adrenals, gastrointestinal tract, pancreas, bladder and generative organs are negative. The brain shows slight excess of clear fluid in subdural space. The vessels are mostly injected. There are three definite ecchymotic spots.

Diagnosis: Subacute bacterial endocarditis (Streptococcus viridans); bronchopneumonia; chronic passive congestion of lungs; infarcts of spleen and kidneys; cerebral infarcts.

The second case that we will present is one that may be misleading because of the history given by the patient of a former complaint and operation some time back. A very plausible diagnosis and cause of death was made but which would have been more accurate had the surgeon time to explore the abdomen.

The patient, an unmarried woman of 39 years, was admitted for exploratory laparotomy on April 25, 1938 and expired four hours later. The attendant had seen her for the past ten days, during which time the patient was already weak and continued to be so during this time. She had lost eight pounds in the past month, had had frequent fainting spells, marked pallor, weak thready pulse, air hunger and pain in the lower abdomen the night before admission. Moist rales were heard throughout the chest with evidences of edema. The heart was rapid but otherwise negative. Other abdominal organs were negative except that two tumor masses about the size of an orange were felt on the right and left side of the uterus and were thought to be fibroids. On admission, her breathing was labored and her extremities cold. She had been operated on in France for what she was told was a peptic ulcer. Her blood pressure was 108/72. The temperature was subnormal, 97°, the pulse 120, and respiration 30 per minute. Red blood cells were 2,020,000; hemoglobin 46, and color index 1.1 with poikilocytosis, anisocytosis, polychromatophilia and normoblasts; leukocytes 20,250 with 84 per cent neutrophiles, of which 7 were stab cells and 2 metamyelocytes. A trace of albumin and an occasional cast were found in the urine. A tentative diagnosis of hemorrhage from peptic ulcer was made.

Autopsy Findings: The body was fairly well nourished, pale, cervical lymph nodes slightly enlarged and discreet. The breasts are negative for tumors. An old scar from an upper paramedian operative incision is present on the abdomen.

The abdominal cavity is moist but no blood. The transverse colon, peritoneum and omentum are adherent by fibrous bands to the operative scar. These have kinked the colon slightly. The pyloric end of the stomach has been removed at an old operation and the posterior surface of the stomach attached and opened into the transverse mesocolon. Mesenteric nodes, remaining gastrointestinal canal, liver, pancreas, spleen and kidneys show nothing of note. The stomach and duodenum are carefully searched for ulcers or tumors but none are found. The retroperitoneal lymph nodes are all enlarged and on section show opaque cream colored areas scattered in the tissue. Both lungs are generally firm in consistency and rather heavy. Considerable dark red fluid is expressed but no definite areas of consolidation are found. The heart is slightly enlarged. No clot is found in the pulmonary artery. The heart chambers are distended with blood, especially the right. The heart wall is thinned out and the muscle somewhat friable. The pelvic organs: The uterus is freely movable. The right ovary is replaced by a nodular, firm tumor mass about 10 cm. in diameter, grayish pink to yellowish pink in color with a few areas of a dark red. The tube is stretched over the outer surface but otherwise shows nothing of note. The left ovary is replaced by a similar tumor mass about 6 cm. in diameter. The cut surfaces of these masses are grayish pink to red in color and present a rather whorled fibrous appearance.

Diagnosis: Gastrectomy (pyloric end) old; gastroenterostomy (old); metastatic carcinoma of right and left ovaries (Krukenberg tumors); metastatic carcinoma in the retroperitoneal lymph nodes (glandular origin); metastatic carcinoma of lungs (microscopic) with extensive edema; granular and fatty degeneration of heart with dilatation.

Dr. Lucien A. Ledoux presented a case report of ruptured hemorrhagic ovarian follicle complicated by acute appendicitis.

S. Z., white female, aged 15, was seen in October, 1937 complaining of pain in the left lower abdomen which had come on suddenly. She had menstruated in April, July, and September of 1936 and September, 1937. The diagnosis of ruptured hemorrhagic ovarian follicle on the left side was made. Several days prior to her first visit she had been troubled with a severe intestinal toxemia. She was sent to the hospital. Shortly after being seen the following morning the pain on the left side subsided with the development of acute abdominal pain in the lower right quadrant. This resulted in the diagnosis of acute appendicitis complicated by a ruptured ovarian follicle on the left side. Exploratory emergency laparotomy revealed these findings to be correct. She had an acute suppurative appendix and the left ovary was enlarged and contained a large corpora hemorrhagicum. The right ovary was completely cystic. Both ovarian cysts were removed in addition to the appendix. The postoperative course was uneventful. The patient has been under periodic observation up until this time. A significant thing is that she has never shown any of the usual symptoms that are so commonly associated with a surgical menopause.

The original case report was published in the Americal Journal of Obstetrics and Gynecology.

HUTCHINSON MEMORIAL CLINIC

Scientific Session conducted by the Department of Pediatrics, Dr. R. A. Strong presiding.

General Remarks on Congenital Heart Disease (Dr. R. A. Strong): From the standpoint of etiology, the great majority of cardiac ailments fall into one of four groups. These groups are congenital abnormalities of the heart, rheumatic heart disease, cardiovascular syphilis, and degenerative lesions of the heart. Each of these four groups has a more or less definite age distribution. Thus congenital cardiac anomalies, present at birth, represent practically the only form of heart disease during infancy and early childhood. From the fifth to the fifteenth year, active rheumatic infection of the heart is frequent. Those who survive the childhood period of active infection go into adult life with varying degrees of heart damage and constitute a large group of chronic cardiac invalids during the third and fourth decades of life. In the forties, syphilis of the heart and aorta has its greatest incidence, though it is by no means limited to this age period. In later life, degenerative changes of heart and vessels rank first in frequence and importance.

It is obvious, therefore, that heart disease in childhood is rather sharply differentiated from heart disease in the adult. With the cardiac disability produced by long-standing rheumatic heart disease, with cardiovascular syphilis, and with degenerative lesions of advancing years, the children's specialist has practically no concern. But congenital abnormalities of the heart and the early stages of rheumatic heart disease are so essentially childhood conditions that the pediatric approach is important for their proper understanding. We have the opportunity to bring to your attention a case of congenital heart disease, which Dr. Williamson will present.

Remarks and Presentation of Cases (Dr. G. R. Williamson): The etiology of congenital heart disease may be divided into two closely related groups: (1) An intra-uterine condition of genetic origin, that is, one in which a parent may have had a rheumatic infection, and (2) a faulty development of the organ, which generally begins as early as the fifth month. Prior to the fifth month, the heart is comprised of one chamber. At this time, it quickly divides into two. Maude E. Abbott classifies congenital heart cases into: (1) those that show no cyanosis; (2) those with intermittent cyanosis, and (3) those with permanent cyanosis. Cyanosis, though not necessarily a part of congenital heart disease, may be due to the mixture of venous and arterial blood, to deficient oxidation from some circulatory interference, and to a change in the blood, polycythemia, which may be regarded as a compensatory factor when deficient oxidation is present. Other physical signs of congenital heart disease are clubbing of the fingers and toes and delayed development, described sometimes as cardiac infantilism, the underlying cause of which is found in the general law that if the functional efficiency of any vital organ is seriously interfered with during the developmental period the growth of the child is delayed. The symptoms of congenital heart disease are breathlessness, attacks of paroxysmal dyspnea, which may be accompanied by paroxysmal tachycardia, and recurrent attacks of syncope and pain.

The term "dextrocardia" is given to a condition in which the heart is transposed to the right side of the thorax. It was recognized as an entity in the early days of medical investigation, and the first case reported in the literature is credited to Petrus Leviis, in Rome, in 1643. It is believed to have an incidence of one in 10,000. Dextrocardia is further described as "isolated" when the heart alone is completely transposed, and as "complicated" or "uncomplicated" to denote the presence or absence of other congenital malformations. Nagel Agerman, in 1909, proposed two classifications of the condition: The first, a true mirror-picture, in which the heart is reversed or transposed to the right side, with the apex pointing to the right, and all the structures of the organ are in the same anatomic and physiologic relation to one another as they would be on the left side; and the second, congenital dextrocardia due to arrest of development.

The first case which I wish to present tonight is that of an 18 month old baby with an isolated dextrocardia. This is an unusual case in which the heart and the cecum are transposed, while the liver and stomach are in their proper places. The cardiac condition was discovered when the baby was only five weeks old. He is under weight, has rapid breathing, is able to walk, but becomes cyanotic on too much exertion. There was evidence of an enlargement of the thymic gland, for which treatment has been given. The roentgen ray of the heart of this baby shows it to be in the shape of a boot, the so-called "coeur en sabot."

The second case is that of a little girl eight years old. This patient was cyanotic at birth and the attending physician had difficulty in getting respiration started. She has remained cyanotic up to the present time. Exercise, of course, increases the cyanosis, as well as causes dyspnea, palpitation and precordial pain. The patient's appetite has always been poor and her general development and nourishment have, therefore, suffered considerably. She is a very nervous, apprehensive child. She has had several childhood diseases, including measles, mumps, pertussis, and pneumonia. A brother of the patient died twenty-seven hours after birth and at autopsy was found to have a dextrocardia and a diaphragmatic hernia.

This little girl presents several interesting features on physical examination. There is marked cyanosis of the lips, ears, nose, mucous membranes

and skin in general. The heart is definitely enlarged to both the right and left, and there is a loud systolic murmur that is heard over all the valvular areas. The liver edge is palpable about 5 cm. below the right costal margin. There is marked clubbing of both the toes and fingers.

An electrocardiogram on January 9, 1936, revealed a sinus tachycardia, marked right axis deviation, prominent P_1 and P_2, vibratory QRS_2, Q_3 present, T_3 inverted. Other laboratory findings on April 21, 1938, revealed a red blood count of 10,320,000, a hemoglobin of 100 per cent, white blood count of 10,000, small lymphocytes 31 per cent, and neutrophiles 57 per cent.

A roentgen ray taken on April 21, of this year, reveals marked enlargement of the heart, and was suggestive of bilateral chronic, passive congestion of the lungs. A roentgen ray of the extremities revealed no bone changes.

A great number of patients with congenital heart disease die in the first few weeks, and if they are deeply cyanosed, there is not much chance of prolonging life. However, if they live beyond this early period, prognosis should await the development of the case. It is possible for the imperfection in fetal life to be repaired by a fuller development in postnatal life, or the defect may become a permanency. Intercurrent disease, especially of the respiratory organs, often proves fatal in these cases, as do blood infections, which are likely to attack the weakened parts of the heart and lead to endocarditis. There is little to be suggested in the way of treatment, except that its course should be guided by the symptoms of the individual. It is well not to place too many restrictions, but rather to allow older children to develop their own reasoning powers in order to regulate their activities according to the discomfort which accompanies them, and they will seldom over-exert themselves. A large percentage of patients, however, remain hopelessly crippled from birth, and these require nursing and feeding, sunshine and protection from infection.

Anemias of Early Life (Dr. R. A. Strong): A sufficient number of studies have been made in the past decade upon which to base a fairly accurate conception of blood production from early fetal life through the period of transition which begins when the baby takes its first breath and ends when the blood picture becomes what is generally recognized as normal. Many interesting things occur during this period. The changes which take place may proceed in accordance with what the present state of our knowledge suggests is normal or we may encounter evidence of interruptions in this normal sequence of hematopoiesis and hemolysis for which we have been unable to discover entirely satisfactory causes.

It seems to be quite definitely established that the production of erythrocytes is not entirely confined to the bone marrow during fetal life, because there is ample evidence that there are extramedullary centers of erythrogenic tissues located throughout the reticulo-endothelial system and red cells are formed in the liver, spleen, and lymphatic tissues generally and sometimes even in the kidney. This is evidenced by the interesting changes which occur both in the type and quantity of cells which are observed in the blood smears taken at intervals in the newborn until the normal standards are reached.

Blood Characteristics of the Newborn: It has been quite generally observed that the color of the blood at birth is a darker shade of red than in later infancy and childhood. This is due to the increased amount of hemoglobin as well as erythrocytes which are present in the period of the newborn. The hemoglobin content has ranged from 117 per cent to 97 per cent in the first ten days of life or expressed in grams of hemoglobin, in 100 c.c. of blood with an erythrocyte count of 5,000,000, from 18.8 to 15.4 grams. The erythrocyte count in the first ten days of life varies between 4,000,000 and 8,000,000 and in the first few days of life, is usually in excess of 5,000,000. The most plausible explanation for this increase in the number of erythrocytes as well as hemoglobin, is that the infant *in utero* is developing in an environment of low oxygen tension exactly as in adults who live at high altitudes. In both instances, it is necessary for the erythrocytes, the carriers of oxygen, to be present in increased numbers so that tissue respiration may be adequately maintained. After birth, when the baby acquires its own oxygen by breathing an atmosphere having a much higher oxygen tension, all of the erythrocytes above the conventional 4 or 5 million become surplus, and as a consequence, are destroyed by hemolysis. This hemolytic destruction of the surplus red cells may result in the formation of bilirubin and the jaundice which not infrequently develops is ordinarily spoken of as icterus neonatorum. The fall in hemoglobin and red cells is usually rapid in the first week or two of life, when both level off to the usual amount and number seen in the average healthy baby. However, both may continue to decline beyond this point for the first six weeks of life, when a low point is reached. When this occurs, an anemic state is reached which is spoken of as a physiologic anemia of the newborn. As a rule, this anemic state lasts only a short time, if medullary hematopoiesis becomes established, in order adequately to adapt itself to the requirements of the rapidly-growing and developing infant. In prematures, the fall in hemoglobin may be even greater, so that in what is spoken of as the anemia of prematurity, the hemoglobin may fall lower than 50.

The blood volume in the newborn averages one-fifteenth of the body weight, as compared to one-thirteenth in the adult. This is known to vary with the time at which the cord is cut. For

example, when the cutting is delayed for some time, as much as an additional 100 grams has been acquired by the newborn baby. The blood volume has been shown to vary between 10.7 per cent and 19.5 per cent during the newborn period, while in later infancy it remains more constant. The coagulation of capillary blood averages about seven minutes, while blood obtained from the superior longitudinal sinus averages about fifteen minutes. From both sources, it is more prolonged in the first ten days of life than it is later. The presence of erythroblasts and other immature forms of erythrocytes is not uncommon in the first week of life. Their size has been known to vary from 3.25 to 10.25 microns. The leukocytes are higher at birth than in adults and may run as high as 25,000 with a preponderance of polymorphonuclear cells, which may be as high as 70 per cent. They rapidly decline, while the lymphocytes increase, until more conventional proportions of the two are reached. Large mononuclears are frequently numerous in early life, but the eosinophiles are more constant.

Hematopoietic Dyscrasias: As has been stated, we may encounter evidences of interruptions in the normal sequence of events, which characterize hematopoiesis and hemolysis in the transition period from prenatal life through the natal and into the postnatal period, when the blood picture is expected to reach the conventional normal. These interruptions in normal function cannot be explained by any obvious causes such as bleeding, malignancy, congenital anomalies, or septic infection. They are so far as our present knowledge is concerned secondary to no known conditions. Several terms have been suggested to describe them. For example, when anemia is the predominating symptom, such a term as congenital anemia of the newborn is used. When a very severe lemon or saffron colored jaundice is present at birth, in addition to the findings of anemia in the blood, we call it icterus gravis neonatorum. When an enlarged liver and spleen are associated with icterus and anemia, and when the blood picture shows an excessive erythroblastic activity in the medullary and extramedullary centers of erythrogenesis, the name erythroblastosis fetalis is applied. Finally, when edema is outstanding, in addition to all of the foregoing symptoms, the designation universal edema of the fetus is used.

Most of the worthwhile contributions to our knowledge of these conditions have been in recent years, and most of the authors have called attention to the striking similarity of all of them. That they are closely related is indicated by certain symptoms which are common to all of them.

In 1924, Cooley reported five cases of anemia in children in which erythroblasts were almost as plentiful in the blood smear as they are in erythroblastosis fetalis and icterus gravis neonatorum. The only difference was they were discovered later in life. Nevertheless, there is reason to believe that erythroblastosis fetalis, icterus gravis neonatorum, and erythroblastic anemia are closely related. Dr. Williamson will now present a case of erythroblastic anemia, which is one of two which she has had under observation for a number of years.

Remarks and Presentation of Case of Erythroblastic Anemia (Dr. G. R. Williamson): The children in whom this condition is found always present the characteristic resemblance to the Mongolian race. This is because of the peculiar yellow, muddy discoloration of the skin, with a thickening of the cranial bones and the malar eminences. This thickening is more pronounced as the disease progresses. When a case is once seen, the appearance makes such a profound impression on the observer that it should be recognized easily whenever it is again encountered.

The next most consistently regular changes are in the bones, and these are promptly recognized as being peculiar to this form of anemia when roentgenograms are made. The skull shows a marked thickening and a peculiar halo resembling the growth of hair. The long bones, pelvis and fingers show a typical mottled or "mosaic" appearance. This is due to a decreased density amounting almost to a transparency in the fibula and tibia. Occasionally there are transverse lines of increased density. These bone changes are typical of this type of anemia, although the thickening and the peculiar halo resembling a growth of hair have also been noted in sickle-cell anemia.

The true etiology of this disease, like icterus gravis neonatorum and erythroblastosis fetalis, is by no means established, but the concensus of opinion is that there is no doubt that all of them are due to some congenital disorder of the blood-forming mechanism. Halpert, in a recent study of human embryos, found that the cells in their medullary canals were practically one hundred per cent erythroblasts. As has been stated, a small number of these seem to pass through the barrier between the centers of blood making and the general circulation during the first few days of life, but soon disappear from the general circulation. On the other hand, they persist in icterus gravis neonatorum and erythroblastosis fetalis for a very considerable length of time after birth.

So far as has been found, erythroblastic anemia has never been diagnosed prior to the fourth month of life, but in view of the almost identical blood picture as that seen especially in icterus gravis neonatorum, the question naturally arises as to whether or not erythroblastic anemia is but a delayed manifestation of a disease entity, the underlying cause of which is the same as icterus gravis neonatorum and erythroblastosis fetalis.

There seems to be a definite familial background for erythroblastic anemia, because it has been noted in cousins and in rural communities of the Mediterranean, where intermarriage is frequent. A theory has been advanced that malaria has played a part in the production of erythróblastic anemia, but as yet no convincing proof has been advanced to substantiate this theory. Several pathologists have remarked that the gross and microscopic appearance of the liver and the spleen strongly resembles those of patients dying from malaria. This is based on the finding of detritus in vessels of the liver and in the blood making islands of the liver. Of course, the excessive fragmentation of erythrocytes seen in advanced cases of malaria is a characteristic that is especially conspicuous in the anemias of the erythroblastic type.

Remarks on Clinical Findings (Dr. Elizabeth Bass, Laboratory of Clinical Medicine): Dr. Williamson and Dr. Strong have mentioned some characteristics of erythroblastic anemia, and I would like to emphasize certain features. There is a definite racial distribution, practically all cases being of Mediterranean races, though there is one case reported of an English girl, and one born in England, but of Greek parentage. There is a definite familial tendency. Its occurrence in early life is characteristic. The patients rarely live beyond ten years, though there is one record of a patient over twenty.

There is a characteristic thickening of the cranial bones, and particularly the malar eminences, which, accompanied by a muddy yellow discoloration of the skin, produces a "mongolian" facial expression. There is marked enlargement of the spleen, with moderate hypertrophy of the liver, and generalized lymphadenopathy.

As regards the laboratory findings, the blood picture is the most characteristic feature. There is invariably some degree of anemia, of the hemolytic type. The hemoglobin is reduced, and the color index low. The outstanding characteristic is the presence of a large number of nucleated red cells. In addition, the red cells tend to be massed or clumped together, rather than uniformly distributed, a finding which Cooley considers pathognomonic. Some cells seem almost colorless, and the degree of color varies in the same cell. Anisocytosis is marked; poikilocytosis present. The reticulocytes are increased in number, and I have seen as high as 11 per cent. There is a consistent increase in leukocytes, ranging from 13,000 to 30,000, and occasionally 50,000. Coagulation is normal, and there is no increased fragility of the red cells. There is a positive indirect van den Bergh. Chronic hemolysis is shown by the pigment in the skin and presence of urobilin in the urine.

With reference to etiology, I would like to quote Drs. Williamson and Crawford in their comment in 1933 (Am. Jour. Dis. Child., 46:565-571, September, 1933) "the changes in the bones are the result of the reaction of the marrow to prolonged overstimulation as a consequence of chronic hemolysis beginning before the cortex is too firm to permit the growth of marrow." Cooley now says that it is a hemolysis due to a metabolic condition, and not as he formerly believed, primarily hemolytic. Koch and Shapiro consider it a definite disease entity, unassociated with rickets or other nutritional diseases. Yaguda pointed out its occurrence most frequently where the mother is above thirty, and has had frequent pregnancies, and suggests a possible exhaustion of some maternal hormone. During a recent visit to the Pasteur Institute in Athens, Greece, Dr. Caminopetros, a noted bacteriologist, stated that he is convinced that erythroblastic anemia is hereditary, being transmitted through the male, in the same relationship and by the same principle as hemophilia is by the female. He has collected data on some 40 cases to substantiate his statement, showing the same cranial bone pathology in the father as in the child.

There is no satisfactory treatment. Most authorities agree that the sole virtue of splenectomy lies in the mechanical relief of the patient's discomfort, and transfusion apparently has no benefit.

Roentgenologic Aspects (Dr. Joseph N. Ane, Department of Roentgenology): The bone changes that we find in erythroblastic anemia are secondary to the stimulation of bone marrow as the result of hemolysis. We find similar changes occasionally in cases of sickle-cell anemia and also in chronic hemolytic anemia.

The portion of the body that shows the most characteristic changes is the skull. The inner and outer tables are thinned. The normal marrow is replaced by a cellular connective tissue of an osteoid nature. This type of tissue arrays itself perpendicular to the inner table, giving the appearance of hair standing on end. These changes are more prominent in the region of the parietal bone, but they are also seen in the region of other bones, The malar bones are very prominent and, in this case, completely overshadow the maxillary sinuses. The diploe are markedly widened. The bone changes are rather well distributed throughout the entire body. The long bones show some widening of the entire shaft with thinning of the cortex and a rather characteristic type of reticulation in the portion of the medullary region of the bone. The bones of the pelvis and spine also show the same characteristic changes.

FACULTY CLUB
LOUISIANA STATE UNIVERSITY SCHOOL OF MEDICINE

The May meeting of the Faculty Club of the School of Medicine of Louisiana State University was held Friday, May 27, 1938 at 8 p.m. at the

Medical Center Science Building. The program was as follows:

Drs. Joseph Stasney and Edward L. Burns of the Department of Pathology and Bacteriology presented the following:

THE INFLUENCE OF ANTI-ANEMIC PRINCIPLES UPON THE SIZE OF THE ERYTHROCYTES OF POUCH OPOSSUMS (DIDELPHIS VIRGINIANA)

The red blood cells of the mammalian fetus are larger than those of the adult animals of the same species. There is a striking similarity between the macrocytosis which occurs in the fetus and that which is found in patients who have pernicious anemia. It has been suggested that the essential principle required for the maturation of the erythrocyte may be lacking both in the fetus and in subjects with pernicious anemia. When these anti-anemic principles become available to patients with pernicious anemia or to the fetus as it normally develops, a marked reduction in the size of the erythrocyte occurs. In previous experiments it was shown that in the pregnant white rat, injections of normal concentrated gastric juice accelerated the maturation of the red blood cells of the developing fetus. This acceleration was demonstrated in the young rats at birth by the fact that both the size and volume of the red blood cells of rats born of treated mothers were considerably smaller than those of rats born of untreated mothers.

In order to test further the effect of the anti-anemic substances upon erythrocytes, an animal was sought in which the principles could be easily administered to the fetus directly. In the opossum (Didelphis virginiana), intra-uterine life lasts 10.5 days. Then these immature young live in the pouch of the mother for 90 days. During their stay in the pouch, the young opossums show a very marked macrocytosis. When they were 24 days old the average diameter of their erythrocytes was 10.4 μ; at the age of 100 days the average diameter of their erythrocytes was 8.1 μ. The average diameter of the red blood cells of adult opossums was 7.4 μ.

When normal concentrated human gastric juice was repeatedly administered to young opossums intraperitoneally, the mean diameter of the erythrocytes was reduced to 8.5 μ, as compared to 9.4 μ in untreated pouch mate controls. When injections were discontinued the mean diameter of the erythrocytes slowly increased, and after 22 days approached that of the untreated animals. At this time a second series of injections of gastric juice was again effective in reducing the size of the red blood cells of the same animals. A solution of concentrated liver extract, administered to animals in the same pouch, produced essentially the same changes in the erythrocytes.

According to these observations there is a gradually diminishing macrocytosis in the new born opossum. This macrocytosis is probably due to a lack of the principles necessary for the normal maturation of the red blood cells. When these principles become available to young opossums, the mean diameter of the erythrocytes becomes smaller.

Dr. Bela Halpert of the Department of Pathology and Bacteriology presented the following subject:

GALLBLADDER DISEASE AND GALL STONES

The immediate cause of the formation of gall stones is an increase and accumulation within the gallbladder of one or more of the stone-forming constituents of the bile. This increase may be hepatogenous, cystogenous or a combination of the two resulting respectively in the formation of pure, mixed or combined gall stones.

Hepatogenous or pure gall stones form when a single stone-forming constituent is in excess in the bile. These may be: (1) Cholesterol stone (solitary); (2) calcium bilirubinate stones, or (3) calcium carbonate stone (rare). Pure gall stones may form and remain in the gallbladder without producing morphologic changes in the viscus or cause clinical manifestations.

Cystogenous or mixed gall stones form when the gallbladder is injured by an inflammatory process. This changes the resorptive function of the viscus in such a manner that the substances holding the stone-forming constituents in solution are resorbed more rapidly than usual, resulting in an accumulation of the stone-forming constituents in an ever increasing concentration.

Combined gall stones form in a gallbladder containing pure gall stones or in one containing mixed gall stones. Thus they have either a nucleus of a pure gall stone and a shell of a mixed gall stone or vice versa.

Approximately 80 per cent of the patients with cholelithiasis have mixed gall stones and somewhat over 10 per cent each have pure or combined gall stones.

A patient may have any of the pure, mixed or combined gall stones yet present no clinical manifestations. Thus a patient with recent signs and symptoms of gallbladder disease may have gall stones antedating the attack. Patients with recurring signs and symptoms of gallbladder disease are likely to have mixed gall stones or combined gall stones with a shell of mixed gall stone. Patients with sudden acute clinical manifestations of gallbladder disease are likely to have either pure gall stones or combined gall stones with the shell of a pure gall stone.

Dr. Bjarne Pearson of the Department of Pathology and Bacteriology discussed the following:

CARCINOMA OF CERVIX

The causes of death and the factors leading to death were studied in a series of cases which came

to necropsy. Of the 57 cases studied all except one were squamous carcinomas of varying degrees of malignancy.

The most frequent and constant necropsy findings were strictured ureters which occurred in 75 per cent of the cases. As a result 33 per cent died of uremia. In patients dying of uremia, the blood urea nitrogen, uric acid and creatinine were determined from one to several times. Increase in these constituents were always present, sometimes to a marked degree. Some degree of oliguria was present and, in some, anuria a few days before death. The duration of the disease in patients dying of uremia was 29 months, whereas those dying of peritonitis averaged only 19 months. The histology in the former cases showed uniformly lower grades.

The next most striking single cause of death was peritonitis, occurring in 19 per cent. The cervix was usually necrotic and harbored virulent organisms in about one-half of the cases. The frequency and severity of the peritonitis developing in carcinoma of the cervix depends not only on the kind and virulence of the bacteria but on the resistance of the patient. Injudicious and uncontrolled radiation therapy also precipitates peritonitis in a number of cases. In six of the present series peritonitis followed as the result of radiation therapy.

Metastasis to the pelvic nodes was present in 59 per cent of the cases; distant metastasis in 25 per cent of the cases, the liver and lung being most frequently involved. The metastases were usually small, but in a few cases large hepatic metastases were encountered. The bones were involved in 7 per cent of the cases. The bones of the pelvis are most frequently involved by direct extension. Two patients had metastasis to the spine, which give rise to compression myelitis and paralysis in one patient. The metastases are usually of an osteolytic character. The average length of life was 19 months. The youngest patient was 27 and the oldest 78 years.

Officers elected for 1938-1939 were:
President, Dr. Peter Graffagnino.
Vice-President, Dr. Edgar Hull.
Secretary-Treasurer, Dr. F. F. Boyce.
George M. Decherd, Jr., M. D., Sec.-Treas.

TUMOR CLINIC, CHARITY HOSPITAL
New Orleans

The scientific meeting of June, 1938, was called by Dr. James T. Nix. Miss Constance Meyer of the Social Service Department presented the following paper:

SOME OBSERVATIONS REGARDING THE ADVISABILITY OF TELLING THE PATIENT THE DIAGNOSIS OF CANCER

There is divided opinion regarding the advisability of telling the diagnosis of cancer to patients with that disease. It is believed by some that knowledge of the diagnosis immediately robs the individual of all hope and that when hope is gone the patient loses his will to live. A different opinion is that each patient with cancer should know the diagnosis so that he will realize the importance of cooperating with the doctors in continuing treatment and reporting for check-ups, With an understanding of the diagnosis, the patient is in a position to make adequate plans for any other problems which may arise in his life connected with his limited ability or total incapacitation.

The middle road seems to be the most advisable. Depending upon the individual patient, knowledge of the diagnosis, by some patients, is welcomed, and by others is obviously not acceptable. Some knowledge of the patient's life and emotional status should be known. If there is financial or emotional strain in the family, knowledge of the diagnosis may be the precipitant cause of a complete breakdown. Certainly it is important to have grounds upon which to base a belief that the patient to be told will be able to accept the diagnosis. In the innstance of elderly patients who have a time-rooted dread of the very word "cancer," nothing is gained by an explanation of the diagnosis. When these patients arrive at the clinic, they often know there is a question of cancer in their diagnosis or that some of the other patients being treated in the same clinic have the disease. The social worker hears many stories beginning with, "If I thought I had a cancer, I couldn't stand it. My husband died of a cancer of the throat and I know what he went through." The mere anticipation of what they expect and what they conjure in their minds regarding the terminal stages of the disease leaves the patients in a defeated frame of mind. When such a patient has a family, it is advisable that some other member be told the diagnosis so that plans can be made for the patient's care.

Mrs. Annie K. has been attending clinic for the past eight months. Following a positive biopsy report, a radical mammectomy was performed. Throughout this period, she has believed she had a tumor which was removed and has rejoiced every time she has returned to the clinic that the lump in her breast was not a cancer. She lives with and is supported by her sister and brother-in-law. She is certain that if she had a cancer they would not want her around the house. The patient's condition was explained to the sister and she is in a position to plan for the patient's future care. If the patient herself had been burdened with the diagnosis, she would have probably become more nervous than she already was and, losing all hope, would have succumbed to complete invalidism.

Cancer has long been associated with middle age and old age. Individuals of a younger group, however, can be affected. In cases of this kind where the patient's age is not a deterring factor and where he is intelligent and capable of accept-

ing the diagnosis, it would be unjust to shield him from the true situation. With knowledge of his condition he can care for himself and plan for his treatment intelligently.

Miss Lorraine C. was a 33 year old woman with carcinoma of the cervix. When she first became aware of her diagnosis, she was very upset emotionally. This reaction was caused mainly because she was so anxious to get the best possible treatment and there was a divided opinion among the physicians treating her as to what treatment she should receive. As soon as this difficulty was straightened out and treatment instigated, the patient proved to be very cooperative. All the treatment advised has been received, and the patient's prognosis is good. No further treatment is indicated at this time and she now gets only check-up examinations approximately every three months. Emotional problems still remain. She worries over not earning her own living and still being a burden on her family, but she has adjusted herself to the diagnosis very well. She has followed the improvement in her condition since treatment was begun, and seems to have no further fear of the disease.

There are times when an explanation of the diagnosis is forced. This occurs usually in instances where the patient refuses treatment. When a patient does not know his diagnosis, it can be understood why he might be uncooperative and resistant to treatment. At such a time a patient should most probably be told that he has a cancer so that he will then realize the full importance of the situation and his decisions regarding it. It is to be expected that the normal patient will agree to treatment and continued periodic examinaion. Such is not always the case. The patient will refuse treatment in full knowledge of the diagnosis. The issue of the diagnosis itself seems to be overlooked and the patient concentrates on some other aspect of his life. The financial situation in the family may be brought forth as the reason why the patient, a wage earner, cannot receive treatment. When arrangements are made so that an allowance will be put into the family and the wage earner is free to follow the recommendations, the patient still resists treatment. He turns to still other features in the situation as reasons prohibiting his receiving the care he needs.

One girl, aged 29, refused treatment even after her diagnosis was explained and interpreted over a long period of frequent interviews and contacts with the patient. She refused treatment on the grounds that her father had been told the diagnosis before she had. She was never able to see beyond this resentment to the actual problem of the need for treatment.

It has been discovered that many patients accept the diagnosis calmly and even seem, in some instances, to be relieved to have a definite answer to their doubts and questionings. Knowing the diagnosis is certainly a factor in making patients realize the importance of continuing under a doctor's supervision and guidance.

One important phase of this subject concerns the problem of who is to tell the patient. The doctors are usually too busy to take time out to explain the diagnosis to the patient. The majority of patients treated in a clinic are treated with the attitude that they are getting along very well. This makes it difficult for the social worker to broach institutional care or plans for terminal care with these patients. Sometimes a patient on the ward is assured by the doctors that she is getting along nicely. No treatment can be offered her, however, and social service is requested to make a plan. Discussion of plans for her care when she leaves the ward comes as a shock to the patient. She cannot understand that she is not to receive treatment. She cannot believe the social worker has correct information and the social worker immediately has a poor working relationship with the patient. When it is necessary that the patient understand that he has a cancer and that plans for his care are needed, the doctor is the logical one to make the original explanation. This should be followed by subsequent interpretation by the social worker.

It is definitely true that the social worker can do better work with the patient who knows his diagnosis. This may, of course, be true largely because of the fact that it is the more intelligent and adaptable person who can accept the diagnosis. Whether or not this is the whole reason, it is nevertheless true that when the patient knows that he has cancer the worker has been able to plan more successfully for future care. The patient can take a more active part in the plans, and the worker and patient have common objectives.

Better cooperation may be possible when the diagnosis can be known by the patient, but it must be remembered that many factors prevent such knowledge. The patient's age, emotional stability and superstitions all enter into the decision and predispose that each decision must be made on an individual basis in full knowledge of the contributing factors.

MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital Staff was called to order on Wednesday, June 1, 1938 at 8:00 p.m. by the President, Dr. E. L. Zander.

The Scientific Program was opened by Dr. H. Ashton Thomas who presented an interesting lantern slide lecture on "Acute Suppurative Parotitis." The subject proved to be very timely as several members present had recently encountered the condition as a postoperative complication. Discussion was entered into by Drs. J. J. Irwin, Chas.

Cox, M. E. DeBakey, Geo. Hauser, J. F. Dicks, J. E. Brierre, P. J. Carter, R. C. Steib and closed by Dr. H. A. Thomas.

The program continued with the general discussion of two cases whose mimeographed histories were supplied to each member present.

The first case was a question of differential diagnosis between meningoencephalocele and cephalematoma. A lively discussion was opened by Dr. Gilbert Anderson, followed by Drs. Dean Echols, L. A. Golden, Sims Chapman, J. J. Irwin, Edgar Hull, P. J. Carter, Maud Loeber and J. F. Dicks.

The second case was one of intestinal obstruction in a child 9 years old. At operation it proved to be an intussusception in the ileum about 12 inches proximal to the ileo-cecal valve caused by a benign papillo-cystoma of the ileum. The discussion was opened by Dr. M. E. DeBakey, followed by Drs. L. J. Hanckes, E. L. Leckert and George Hauser.

After a brief recess the meeting resolved into executive session following which it adjourned until the October meeting.

E. R. Guidry, M. D., Sec.

FRENCH HOSPITAL

A regular meeting of the French Hospital Visiting Staff was called to order on May 21, 1938, with Dr. J. P. Palermo presiding. The minutes were read by Dr. R. E. Rougelot.

The deaths of the previous month were then discussed.

Dr. Graffagnino spoke on some new work being done at Charity Hospital and L. S. U. in which proliferation of endometrium was used as a basis for therapeutic endocrinology. After a four day period of bleeding during menstruation, there is a gradual regeneration of the endometrium under the influence of estrin in the first phase up to ovulation and no other endocrine affects it. In the second phase progestin comes into effect and this tends to check proliferation. Nuclei which are at the base of the cell in the gland layer begin to leave and glycogen forms. The giand becomes secretory in the second stage when ovulation occurs. Estrin continues to be secreted after a slight drop in activity and progestion influence decreases if woman menstruates or increases if pregnancy intervenes.

Treatment of various disorders of menstruation is predicated on the basis of the above endometrial changes as demonstrated by the biopsy punch and examination of tissue.

In the absence of estrin influence, substitution therapy, anterior pituitary extract or thyroid is used.

In excess bleeding, if tissue shows last stage, the roentgen ray is used to depress function of both hormones. In studying the hormones it was found that progestin inhibits the effect of pituitary hormone, while estrin exalts the effect of pituitary hormone on the uterine muscle. These facts being useful in the treatment of dysmenorrhea, estrin or progestin should be given on a basis of the type of tissue. Functional menorrhagia may be caused from pre-ovulation estrin effect and should be treated by anterior pituitary-like substance. Tissue examination can be determined by biopsy punch. Another advantage of the biopsy punch method of the endometrial study is in the diagnosis of the ectopic pregnancy. Formerly 40 per cent of cases gave difficulty in diagnosing, but with the biopsy punch there shows in the endometrium persistent corpus luteum stage and a decidual reaction of the epithelioid-like cells in about 95 per cent of the cases.

Dr. J. Signorelli then presented a scientific program on birth injury showing the differential aspects of caput succedanum and cephal hematoma indicating that the former is spread over the sutures while the latter is confined by the sutures. The internal varieties of cranial injuries were enumerated with black board demonstration of the regions usually lacerated with the type of hemorrhage or tear resulting, and a case was described in which a clearly localized hemorrhage was treated by operation with removal of the clot and subsequently perfect recovery.

The description of the manner in which death occurs in intracranial hemorrhage with characteristic mottled description and asphyxia was described. Treatment with whole blood, except in cases of idiopathic hemorrhage tendency, was considered to be of little benefit.

Dr. W. H. Harris briefly discussed the pathology in these birth injuries.

Miss Sue Barker, the new superintendent, was introduced to the staff.

R. E. Rougelout, M. D., Sec.

HIGHLAND SANITARIUM

The Staff of the Highland Sanitarium held its monthly meeting on May 19, 1938, in the Clinic Building. Since there was no new or old business to come before the staff, the scientific program was presented.

First, there were three short discussions by the physicians who attended the recent Louisiana State Medical Society meeting at New Orleans, Drs. Hendrick, Rutledge and LeDoux giving reports on papers of interest in their various specialties.

Dr. W. P. Mathews then gave a most interesting talk on papers and work that he had heard and seen while on a month's sojourn in the East. One of the most interesting features of this talk was on the one dose serum in the treatment of pneumococcal pneumonia; also he discussed filtrable viruses and virus diseases; again his discussion of cancer and the modern treatment of this disease

was most enlightening.

Dr. C. L. LaRue presented a case of heterochromia. This was a small boy, brunette in complexion, who had one blue eye and one brown eye. The significance of this condition was discussed by Dr. LaRue and Dr. I. H. Smith. Dr. LaRue also, for the first time, gave a brief report of a new cyclopegic drug that he is using. This is a combination of benzedrine sulphate (ophthalmic) and a dilute solution of homatropin. A combination of these drugs seems to have a marked advantage over any cyclopegic drugs in use, as dilatation of the pupils occurs in a much shorter time, three minutes against one hour, and the effects are recovered from in a much shorter period, three to six hours instead of 24 to 48 hours with homatropin and 48 to 72 hours with atropin. From Dr. LaRue's glowing report, much can be expected in the future from this new drug.

E. D. Rowland, M. D., Sec.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR

July 5. Board of Directors, The Orleans Parish Medical Society, 8 p. m.

July 6. Clinical Pathological Conference, Charity Hospital and L. S. U. Medical Center, 2 p. m.

July 6. Hutchinson Memorial Clinic Staff, 8 p. m.

July 7. Clinicopathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

July 11. ORLEANS PARISH MEDICAL SOCIETY, Joint Scientific and Second Quarterly Executive Meeting, 8 p. m.

July 13. Clinical Pathological Conference, Charity Hospital and L. S. U. Medical Center, 2 p. m.

July 14. New Orleans Hospital Council, French Hospital, 8 p. m.

July 20. Clinical Pathological Conference, Charity Hospital and L. S. U. Medical Center, 2 p. m.

July 21. Clinicopathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

July 27. Clinical Pathological Conference, Charity Hospital and L. S. U. Medical Center, 2 p. m.

July 28. Clinicopathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

During the month of June, the Society held its annual joint clinical meeting with the Marine Hospital at the United States Marine Hospital on Monday, June 13. These meetings are always well attended and the members look forward to them. Monday, June 27, was designated as Past Presidents' Night when the Society paid tribute to the men who served as President since its organization in 1878. The following excellent program was presented:

Invocation.

Address of Welcome by the President, Dr. Shirley C. Lyons.

Response in Behalf of the Past Presidents by Dr. Marcus J. Magruder.

"A Review of Progress in the Treatment of Empyema," Dr. James M. Mason of Birmingham, guest speaker.

Presentation of Certificates to the Past Presidents in Behalf of the Orleans Parish Medical Society by Dr. Rudolph Matas.

The meeting was held in the Tulane Room of the Jung Hotel and was well attended by members an their friends. The following is a list of the Past Presidents:

1878-1937

*Dr. Charles Turpin	1878
*Dr. Stephen Solon Herrick	1879-80
*Dr. John P. Davidson	1881, 1887-89
*Dr. Charles Jasper Bickman	1882
*Dr. Thomas Layton	1883
*Dr. Percival Butler McCutchon	1884
*Dr. George W. Lawrason	1885
*Dr. Felix Formento	1886
*Dr. Charles Chassaignac	1890-92
*Dr. Arthur Washington DeRoaldes	1893
*Dr. Edward M. Dupaquier	1894
*Dr. Frederick William Parham	1895
*Dr. Edmond Souchon	1896
*Dr. John Callan	1897-98
*Dr. Isadore Dyer	1899
*Dr. Thomas S. Dabney	1900
*Dr. Edmund Denegre Martin	1901
Dr. Hermann Bertram Gessner	1902
*Dr. Edwin Jackson Graner	1903
Dr. Marcus Johns Magruder	1904
*Dr. Louis George LeBeuf	1905
*Dr. Charles Jefferson Miller	1906
*Dr. John Joseph Archinard	1907
Dr. Amedee Granger	1908
Dr. William Henry Seemann	1909
*Dr. Benjamin A. Ledbetter	1910-11
Dr. Eugene Henry Walet	1912
*Dr. Homer Dupuy	1913
Dr. Charles Noel Chavigny	1914
Dr. Wilkes Herman Knolle	1915-16
*Dr. Paul Joseph Gelpi	1917-18
Dr. Hector Emile Bernadas	1919-20
Dr. Stephen Mertle Blackshear	1921
Dr. William Henry Block	1922
Dr. Hiram Watkins Kostmayer	1923
Dr. Stanford Chaille Jamison	1924
Dr. Urban Maes	1925

Dr. Maurice Joseph Gelpi	1926
Dr. Albert Emile Fossier	1927
*Dr. James Birney Guthrie	1928
Dr. Erasmus Darwin Fenner	1929
Dr. Christian Grenes Cole	1930
Dr. Emmett Lee Irwin	1931
Dr. John Alexander Lanford	1932
Dr. Edward Lacy King	1933
Dr. Waldemar Rice Metz	1934
Dr. Valentine Henry Fuchs	1935
Dr. Frederick Leonard Fenno	1936
Dr. James Thomas Nix	1937

* Deceased.

NEWS ITEMS

Dr. Howard R. Mahorner spoke May 20 at the annual meeting of surgeons of Alabama Power Company, at Mitchell Dam. His subject was varicose veins.

Dr. Gilbert C. Anderson and Dr. Dean H. Echols attended the meeting of the Harvey Cushing Society, in Memphis, during the third week in May.

Dr. Hilliard E. Miller attended the meeting of the American Gynecological Society in Asheville, May 28-June 3.

Dr. Urban Maes attended the meetings of the Society of Clinical Surgery and the American Surgical Association, and took part in a conference on the acute gallbladder at the Postgraduate Hospital in Philadelphia. He also attended the meeting of the New York State Medical Society.

The Central Mississippi Medical Society presented a program by the Faculty of Tulane University School of Medicine, June 7, at Jackson, Mississippi. Those presenting papers were: Drs. Edgar Burns, D. C. Browne, Arthur Caire, Jr., Guy A. Caldwell, Conrad Collins, Mims Gage, Michael DeBakey, Julian Graubarth, Dean H. Echols, Ernest Carroll Faust, Philip H. Jones, Francis E. LeJeune, Leon J. Menville and Neal Owens.

On May 25 the graduating exercises of Hotel Dieu were held with Archbishop Rummel delivering the address. A banquet was held in honor of the graduates and the following staff members attended: Drs. Ruth Aleman, H. E. Bernadas, O. C. Cassegrain, M. M. Green, C. E. Gorman, Maurice Couret, J. A. Danna, T. J. Dimitry, Val Fuchs, Lucy S. Hill, Jerome Landry, Louis Levy, Lucien LeDoux, Aldea Maher, A. D. Mouledous, J. T. Nix, C. V. Perrier, W. J. Otis, C. J. Tripoli, Jeanne Roeling, Marion Souchon, P. B. Salatich, John Signorelli, H. T. Simon, M. T. Van Studdiford and E. H. Walet.

Diplomas were presented to 57 graduate nurses of the Charity Hospital School of Nurses, May 31, by Dr. George S. Bel. Dr. William D. Phillips was master of ceremonies.

Dr. Joseph C. Menendez was presented a plaque by the New Orleans Post 1566, Veterans of Foreign Wars, as a "token of unselfish devotion to veterans."

Dr. Theodore J. Dimitry has been named Chairman of the Monument Committee to work for beautiful monuments on the city's neutral grounds. Medical hero monuments are planned for Tulane Avenue.

Dr. Francis L. Jaubert was re-elected President of the Louisiana Society for Crippled Children and Dr. Guy A. Caldwell was elected Second Vice-President.

Dr. A. L. Levin has been elected President of the Louisiana Chapter of the National Gastro-enterological Society; Dr. Donovan C. Browne, Vice-President, and Dr. Percy Querens, Secretary-Treasurer.

The following members have been lecturing during the last semester in the Public Health Series at Xavier University: Drs. J. S. D'Antoni, A. V. Friedrichs, George Hardin, William H. Harris, Maud Loeber, A. J. McComisky, Paul McIlhenny, John Pratt, Walter Levy, Walter J. Otis, Robert A. Strong and H. L. Weinberger.

Dr. Walter E. Levy spoke before the Quota Club, May 24, on "Preventive Instead of Curative Measures."

Dr. William P. Bradburn was Chairman of the Arrangements Committee for the forty-first annual session here, May 24-26, of the Association of Surgeons of the Southern Railway System. Other members on the committees were Drs. Muir Bradburn, W. Rogers Brewster, R. J. Christman and Alex R. Crebbin. Dr. William P. Bradburn was elected Third Vice-President of this group. Dr. Isidore Cohn and Dr. Urban Maes were guest speakers.

At the annual alumni banquet of the C. Edmund Kells Odontological Society, honorary dental group of Loyola University, May 25, tribute was paid to the memory of Dr. Kells. Among the speakers was Dr. C. Victor Vignes.

At the meeting, May 27, of the Faculty Club of Louisiana State University School of Medicine, Dr. Peter Graffagnino was elected President for the coming year, Dr. Edgar Hull, Vice-President, and Dr. Frederick F. Boyce, Secretary-Treasurer. The program included talks by Drs. Bela Halpert, B. I. Burns, and discussions by Drs. A. L. Levin, Peter Graffagnino and D. M. Kingsley.

Dr. Edwin Socola has been appointed Clinical Professor in the Department of Pediatrics at the Louisiana State University School of Medicine.

It has been decided, according to Dr. Hiram W. Kostmayer, to make the training course for Medical Reserve Officers an annual event of the Graduate School of Tulane University School of Medicine. There were 67 officers registered for the course held this past May which combined professional postgraduate instruction and a conference on medical military matters.

Drs. Victor Smith and W. B. Clark announce that Dr. Wallace C. Beil of Kansas City will be associated with them. Dr. Beil has been appointed to the Visiting Staff of the Eye, Ear, Nose and Throat Hospital.

Dr. D. M. Kingsley will serve as ship's doctor on the Delsud on its next trip.

Dr. T. B. Sellers has returned from the International Congress of Obstetricians and Gynecologists in Amsterdam.

Recently published is a biography of the late Dr. Russell E. Stone, written by Dr. Rudolph Matas and prefaced by Dr. A. J. Hockett. The volume, a memorial to Dr. Stone who served Touro for over 26 years, is inscribed "In Memoriam—Russell Edward Stone—1878-1937" and tells of his education, distinctions and professional and personal characteristics and his services to the infirmary.

Dr. C. Walter Mattingly was made honorary member of the Loyola Chapter of Blue Key, national honorary service fraternity, at the meeting May 19, when Dr. Amedee P. Granger talked on principles underlying the use of roentgen rays in locating foreign objects in the human system.

Dr. Willard R. Wirth was received into Fellowship of the American College of Physicians at its recent annual meeting. Dr. Wirth was also notified of his certification by the American Board of Internal Medicine.

The following members attended the meeting of the American Medical Association at San Francisco: Drs. Charles A. Bahn, Elizabeth Bass, Hugh T. Beacham, Guy A. Caldwell, Philips J. Carter, Rena Crawford, Edmund McC. Connely, Frederick L. Fenno, George H. Hauser, Ben R. Heninger, Ralph Hopkins, Edward L. King, John H. Musser, Alton Ochsner, Curtis H. Tyrone, H. Randolph Unsworth, William H. Seemann, Carroll Smithers, Robert A. Strong, James W. Tedder, M. T. Van Studdiford, Irwin Wexberg, G. Richarda Williamson, Theodore A. Watters and Roy W. Wright.

Dr. Clothilde Jauquet was elected to Honorary Membership in the Orleans Parish Medical Society.

Dr. George Haik and Dr. Clarence P. May were elected to Active Membership.

Dr .Val H. Fuchs spoke on "Otolaryngological Problems of the General Practitioner" at the meeting of the Seventh District Medical Society in Rayne, June 9, and Dr. R. M. Willoughby spoke on "Conservation in Urological Surgery."

During the recent legislature when several bills were introduced that concerned the medical profession, the successful outcome was most satisfactory and due to the efficient work of the following: Dr. Roy B. Harrison, of the Louisiana State Board of Medical Examiners, Dr. C. Grenes Cole, of the State Society and Dr. C. L. Brown, of the Orleans Parish Medical Society.

The Library will be glad to have reprints for use in its Out-of-Town Extension Service.

Dr. Roy de la Houssaye read a paper with slides on the thymus glands at the Tri-County Medical Society meeting at Tylertown, Mississippi, June 14.

Dr. Charles A. Bahn attended the American Medical Association meeting and opened a discussion on "Vascular Obliteration for Various Types of Keratitis with Special Reference to the Nutrition of the Corneal Epithelium."

Dr. Henry W. E. Walther attended the American Urological Association meeting in Quebec, June 27-30.

Dr. Anees Mogabgab, President of the last graduating class of McDonogh High School No. 1, presided at the twenty-fifth anniversary reunion of the class.

Dr. William H. Perkins is in charge of the courses of health education and maintenance offered by Tulane University.

Dr. George M. Decherd has resigned from the Department of Medicine of L. S. U. and will return to the Medical School of the University of Texas.

Dr. J. Ross Veal has accepted the position of Chief Resident Surgeon at the Gallagher Memorial Hospital in Washington, D. C., effective July 1. The position carries teaching connections at Georgetown University and George Washington University.

WOMEN IN MEDICINE

In the History Room of the Library is an impressive exhibit. It is a unique and comprehensive

account of "Women in Medicine" from the earliest to the most recent times, a record that speaks silently of struggles and of successes.

Comprising photographs, monographs and publications from the libraries of the Orleans Parish Medical Society and Tulane University School of Medicine and from the personal collection of Dr. Elizabeth Bass, the display is so arranged that one may trace the progress of medical women through the centuries and discover many interesting facts. Reproductions of old woodcuts, engravings and carvings, depicting women physicians of antiquity contrast with photographs of more modern periods. Brochures and books, some rare old editions, and autograph columns, tell of the movement for equal rights, the development of medical education in various countries, American pioneers, women Army surgeons, American Woman's Hospital movement, the part of women in the World War, Oriental medical women and a collection of modern monographs by medical women. From this wealth of material we have made the following notations:

The Sumerians held women physicians in the highest respect 6,000 years ago.

Aspasia (1st century) wrote first record of podalic version and was perhaps the first to use this technic.

Pliny (A. D. 70) tells of Greco-Roman women who wrote medical books before the time of Augustus.

Alessandra Giliano, Professor of School of Bologna (1326) injected and colored anatomical specimens.

In 1292 there were eight women physicians in Paris.

Trotula (11th century) taught in School of Salerno and her book on gynecology was followed for three centuries.

Louise Bourgeois (1563-1638), pupil of Pare, was one of the first to force premature labor in the case of placenta previa with hemorrhage.

Anna Morandi Manzalini, 1716, introduced wax models of dissection.

Marie Anne Victorine Boivin, 1773-1840, was famous for her invention of pelvimeter and speculum and for her research on hydatid moles, obstetrics, and placental absorptions.

Dr. Elizabeth Cohen, who was the first woman country to graduate in medicine, 1849.

Dr. Elizabeth Cohen, who was the first woman doctor in New Orleans, practiced from 1857 to 1905.

There are 7,000 women physicians in America and all but three medical schools admit women.

TREASURER'S REPORT

Actual book balance April 30, 1938	$5,026.69
May credits:	$ 558.69
Total credits:	$5,585.38
May expenditures:	$ 819.12
Actual book balance May 31, 1938	$4,766.26

LIBRARIAN'S REPORT

During April and May, 82 volumes have been added to the Library. Of these, 27 were received by binding, 25 by gift and 27 from the New Orleans Medical and Surgical Journal. Notation of new titles of recent date will be given next month.

The Library has loaned to doctors during April and May, 1,881 books and journals, or more than three to each member of the Society. In addition, 1,608 volumes have been loaned to students for overnight use, making a total of 3,489 for the month. These figures do not include the great use of books and journals within the Reading Rooms.

Members of the staff have collected material on the following subjects during the two months:

Otolaryngology and the general practitioner.
Advantages of membership in medical societies.
Mazoplasia.
Alcohol injection for relief of pain.
Injuries of supra-spinatus tendon.
Surgery of sympathetic nervous system.
Vitamin C and its relation to bleeding in gastro-intestinal diseases.
Thymus in children.
Dermatophytosis.
Gas bacillus infection.
Metrazol and insulin in treatment of dementia precox.
Bilateral renal calculi.
Cyclic vomiting.
Marriage.
Viruses.
Abnormalities of hepatic artery.
Relation of endocrine disorders to ophthalmology.
Radio and medical ethics.
Dextrocardia.
Hygroma.
Hematoma of abdominal wall.
Volvulus of cecum.
Trauma and cancer.
Medical ethics.

LOUISIANA STATE MEDICAL SOCIETY NEWS

STUDY OF MEDICAL CARE
Conducted by the
AMERICAN MEDICAL ASSOCIATION

The American Medical Association will supply forms to state medical associations for distribution to all county medical societies for each to conduct a Study of Medical Care within its county or where a local society is composed of more than one county, it should include all counties which comprise the society. When the study is completed, a condensed report should be made out in triplicate. One copy should be filed by the county society, one mailed to the American Medical Association, 535 North Dearborn Street Chicago, Ill., and one to the Louisiana State Medical Society. Numbers and titles of forms follow:

1. Information Concerning Medical and Dental Practice.
2. Information Concerning Hospitalization.
3. Information Concerning Nursing Services.
4. Information Concerning Health Department Activities.
5. Information Concerning Medical Services Arranged for or Provided by Private or Governmental Welfare and Relief Agencies.
6. Information Concerning Health and Medical Services Arranged for or Provided by Public, Parochial, and Private Schools Below the College Level.
7. Information Concerning Health and Medical Services Arranged for or Provided by Colleges and Universities.
8. Information Concerning Medical Services for or Provided by Industrial, Fraternal, Mutual Benefit, Group Hospitalization, Community Health and Other Similar Organizations or by the County Medical Society.
9. Information from Pharmacists. Instructions for Form No. 9.
10. Summary Sheet to be used by county medical societies for recording the summarized information which is collected from various sources on Forms 1-9 inclusive. A sheet of instructions will accompany the Summary Form.

ATTENTION MEMBERS OF LOUISIANA STATE MEDICAL SOCIETY

At the last meeting of the Executive Committee the following slogan was unanimously adopted: "Every Eligible Doctor in Louisiana a Member of the State Society."

In 1937 we had 1,348 members in the State Society. Up to date we have received 1938 dues for 1,276 members. From statistics available in our office we find that there are between five and six hundred doctors in the state who have not paid 1938 dues and who are eligible for membership. Just think what an easy task it would be for the officers of the State Society if each member of organized medicine would give one hundred per cent cooperation and secure for the State Society at least one additional member.

Could you not carry to these non-members the many benefits and privileges which you enjoy as a member of the State Society and secure their interest in becoming a member of our organization? You should realize that never in the history of our organization has there been more definite need for a united medical front, and this can only be accomplished by the largest membership possible. We need you in this drive. Help us to reach the goal and the wishes of the Executive Committee.

P. T. Talbot, M. D.
Secretary-Treasurer.

DOCTOR MATAS HONORED

Louisiana's most distinguished physician has been officially recognized as America's most distinguished medical man. The House of Delegates of the American Medical Association, acting June 13, selected Doctor Matas to be the first recipient of the distinguished service medal for "meritorious service in the science and art of medicine." This medal is to be awarded annually to the most worthy member of the medical profssion. Doctor Matas' selection is to be considered noteworthy as he will be the first of that which, in after years, will be a long line of outstanding men.

The name of Doctor Matas was one of thirty or more that were submitted to the Board of Trustees of the American Medical Association. From this list of names, the Board selected the names of Dr. Simon Flexner, of the Rockefeller Institute for Medical Research; Dr. Ludvig Kektoen, of Chicago, Director of the National Institute of Health, and Doctor Matas. These three selections were then voted upon by the House of Delegates of the American Medical Association. Doctor Matas received more of the delegates' votes than the combined votes for the other two candidates.

The medical profession of Louisiana may share in the reflected glory of Doctor Matas' achievement. We are proud that our great surgeon should be considered by representatives of every state in the Union to be the outstanding medical man in this country.

BI-PARISH MEDICAL SOCIETY

The meeting of the Bi-Parish Medical Society was called to order June 2, 1938 by the Vice-President, Dr. W. J. Roberts. Following dinner at the hospital, the scientific program, which consisted of papers and demonstration of the use of metrazol on patients in the institution, was held in the Staff Room.

Dr. N. F. Stafford spoke on the use of metrazol, and Dr. Charles Miller read a paper on insulin, both of which were discussed favorably by the members present. A vote of thanks was extended to Drs. Stafford and Miller for their presentations.

The next meeting of the society will be held on the first Wednesday in August at 7:30 p.m. at the East Louisiana State Hospital, Jackson, Louisiana.

E. M. Toler, M. D., Sec.

MOREHOUSE PARISH MEDICAL SOCIETY

The regular monthly meeting of the Morehouse Parish Medical Society was held at the City Hall in Bastrop on May 10, 1938. Members present were Drs. Raney, Jones, Garnier, Leavell, Rodgers, Ogden, Sims and Patterson. Dr. Lyles, Morehouse Parish Health Director, was also present.

Dr. J. N. Jones, delegate, gave a report on the recent meeting of the State Medical Society held in New Orleans.

Dr. C. J. Raney presented an interesting paper on "Undulant Fever."

F.B. Ogden, M. D., Sec.

LOUISIANA GASTRO-ENTEROLOGICAL SOCIETY

The Louisiana Chapter of the National Gastro-enterological Society held its annual election of officers on May 26, 1938 and the following physicians were elected to conduct the affairs of the organization for the coming year:

Dr. A. L. Levin, President.
Dr. Donovan Browne, Vice-President.
Dr. Percy Querens, Secretary-Treasurer.

The meeting preceded a social for the members and their wives, at which Dr. and Mrs. Levin were the hosts.

Dr. Oscar Bethea, invited as guest speaker, delivered a short, but instructive talk on the care, sterilization and maintenance of the elasticity of the stomach tube, fortified with further elaboration in assisting the patient to overcome the unpleasantries associated with swallowing a tube, and subsequent gastric lavage. Comments by some of the members brought out unusual experiences, and report of a case of general melanomatosis which (though contrary to modern belief) may have been dormant for twelve years following the removal of an eye showing a primary melanotic growth.

Dr. Anderson spoke on the relation exhibited between the central nervous system, especially the autonomic, and the gastrointestinal tract, the latter unfolding a group of symptoms caused by a distorted physiology of the former and resulting in errors of function.

Short comments by other members closed the scientific meeting.

AMERICAN CONGRESS OF PHYSICAL THERAPY

The seventeenth annual scientific and clinical session of the American Congress of Physical Therapy will be held cooperatively with the twenty-second annual convention of the American Occupational Therapy Association, September 12-15, 1938, at the Palmer House, Chicago. Preceding these sessions, the Congress will conduct an intensive instruction seminar in physical therapy for physicians and technicians, September 7-10.

The convention proper will have numerous special program features, a variety of papers and addresses, clinical conferences, round table talks, and extensive scientific and technical exhibits.

The instruction seminar should prove of unusual interest to everyone interested in the fundamentals and in the newer advances in physical therapy. The faculty will be comprised of experienced teachers and clinicians; every subject in the physical therapy field will be covered. Information concerning the convention and the instruction seminar may be obtained by addressing: The American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago.

INTERNATIONAL COLLEGE OF SURGEONS

The second national assembly of the International College of Surgeons will be held in Philadelphia, Pennsylvania, with the headquarters at the Bellevue Stratford Hotel, on October 13 and 14, 1938.

All members of the medical profession of good standing are cordially invited to attend the scientific program and various clinics. There will be no registration fee.

NEWS ITEMS

Members of the State Medical Society, exclusive of residents of New Orleans, attending the meeting of the American Medical Association in San Francisco, June 13-17, were as follows: Dr. H. O. Barker, Alexandria; Drs. Dean H. Duncan, H. G. F. Edwards, Arthur A. Herold, Douglas L. Kerlin, Paul W. Winder, all of Shreveport; Drs. S. R. Edwards and Robert Kapsinow, of Lafayette; Drs. James Q. Graves and P. L. Perot, of Monroe; Dr. G. C. McKinney, Lake Charles; Dr. H. M. Prothro, Pleasant Hill; Dr. Bennie E. Spencer, Sterlington.

At the invitation of the South Mississippi State Medical Society, three members of the Graduate School of Medicine Staff of the Louisiana State University Medical Center spoke at a meeting of the Society held at the Forrest Hotel in Hattiesburg, Mississippi, on June 9, 1938. Dr. James T. Nix, Dean of the School, addressed the Society on "Carcinoma of the Stomach and Its Surgical Handling." Dr. John Connell, of the Department of Pathology, spoke on "Lymphogranuloma Inguin-

ale" (A motion picture). Dr. A. L. Levin, Professor of Medicine, talked on "A Diagnostic Clinic in Gastro-enterology: Presentation of Case Records."

Assistant Surgeon Dale C. Cameron has been relieved at Evansville, Ind., upon arrival of Passed Assistant Surgeon Fred P. Burow, and ordered to proceed to New Orleans and report to the Medical Officer in Charge of the U. S. Marine Hospital at that place for duty.

Passed Assistant Surgeon Paul E. Walker has been relieved from duty at New Orleans, as of June 29, 1938, and ordered to proceed to Mobile, Ala., and report to the Medical Officer in Charge of the U. S. Marine Hospital at that place for duty.

THE DOCTOR

This well known picture, the reproduction of Sir Luke Fildes' masterpiece "The Doctor," was first shown at the Century of Progress Exposition in 1933 and again in 1934. It was then sent on tour of the country and was viewed by over five million people. This magnificent reproduction was recently presented by the Petrolagar Laboratories to the new Rosenwald Museum of Science and Industry in Chicago.

REFRESHER COURSE IN PEDIATRICS

A Refresher Course in Pediatrics was conducted in Marksville, June 13-17, by Dr. Cecil O. Lorio. The course, which consisted of lectures, round table conferences and consultation, was sponsored by the Committees on Medical Education and Pediatric Courses of the Louisiana State Medical Society, and the Bureau of Parish Health Administration and the Division of Maternal and Child Health of the Louisiana State Board of Health. Similar courses will be given at designated points within each councilor district; a cordial invitation is extended to all physicians to attend.

ASSEMBLY OF LABORATORY DIRECTORS

There will be held in the Hot Springs National Park, Arkansas, October 21-22, a meeting of laboratory workers from the entire country, as well as physicians and health officers interested in the control of syphilis. This meeting is under the auspices of the Committee on Evaluation of Serodiagnostic Tests for Syphilis of the United States Public Health Service; Surgeon General Parran will be the chairman. The schedule calls for four sections, the most important of which will be apparently the first section. Drs. Eagle, Hinton, Kahn, Kline and Kolmer will be among those presenting papers.

INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the state, which contain the following summarized information. For the week ending May 21, syphilis led all other reportable diseases, as it has done for the past many weeks, with a total number of 274 cases listed. Other diseases, occurring in frequency greater than 10, came in order: 44 cases of whooping cough, 43 of pneumonia, 37 of measles, 27 each of cancer and pulmonary tuberculosis, 14 of influenza and 11 of malaria. A patient developed poliomyelitis in Iberia and another in St. Mary Parish this week. The typhoid fever cases listed numbered only seven. The succeeding week, ending May 28, the following diseases were listed in double figures: 134 cases of syphilis, 42 of pneumonia, 40 of gonorrhea, 28 of cancer, 27 of pulmonary tuberculosis, 13 of measles and 11 of scarlet fever. There were two additional cases of poliomyelitis reported in Tangipahoa and Orleans parishes. A case of smallpox was also reported at this time from New Orleans. Four cases of undulant fever, as well as two of tularemia were listed, both of the latter coming from St. Helena. For the next week, which came to a close June 4, there were reported 168 cases of syphilis, 49 of pulmonary tuberculosis, 35 of pneumonia, 27 of measles, 21 of gonorrhea, 20 of cancer, 13 of pellagra, and 10 each of typhoid fever and whooping cough. Another case of poliomyelitis was listed this week from Orleans Parish. The typhoid fever cases were scattered throughout the state, no one parish listing more than two instances. Smallpox was observed in one individual in Natchitoches. For the last week for which figures are available, that of June 11, 173 cases of syphilis were reported, followed by 79 of pulmonary tuberculosis, 41 of pneumonia, 37 of whooping cough, 32 of cancer, 14 of hookworm, 13 each of malaria and typhoid fever, 12 of influenza and 10 of diphtheria. There was a marked increase in the number of cases of pulmonary tuberculosis over the five year average for the week, which is 32.2; whooping cough, also, is decidedly on the increase. There were listed two additional cases of poliomyelitis, one from St. Mary and one from Jefferson. Three instances of tularemia were

observed, two from Caddo and one from Rapides. There were 13 cases of typhoid fever listed this week, Caddo reporting four, Franklin three, and Richland two; the remainder of the cases were scattered around in the parishes.

HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of the Census, reports that for the week ending May 14, there were 128 deaths in the City of New Orleans, divided 82 white and 46 negro, as contrasted with 136 deaths the previous week. There were 11 deaths in infants under one year of age. There was an increase of 14 deaths over the previous week, during the week ending May 21, largely as a result of 17 more deaths in the negro population, there being 63 as contrasted with 79 white deaths. It is possible that a good many of these deaths may be contributed to the increase in infant mortality, there being 19 infant deaths this week. There was a slight decrease in the number of deaths for the next week, ending May 28, with 136, divided 73 white and 63 negro, and with a mortality in infants of 15. For the week ending June 4, there was a still further diminution to 129 deaths, 74 of which occurred in the white and 55 in the negro population. The infant deaths this week numbered 14. For the week ending June 11, there was quite a sharp increase in the death incidence in the city. There were listed 155 people dying in New Orleans, of which 96 were white and 59 negro. The children under one year of age who expired this week totalled 15.

The number of deaths in the city this year was somewhat lower than in 1937; in this latter year, for the first 23 weeks, there were 3713 deaths as compared with 3531 in 1938. This reduction in the number of deaths was proportionately divided between the two races.

THE AMERICAN COLLEGE OF PHYSICIANS TO MEET IN NEW ORLEANS

The twenty-third annual session of the American College of Physicians will be held in New Orleans, with general headquarters at the Municipal Auditorium, March 27-31, 1939.

Dr. William J. Kerr of San Francisco is President of the College and will have charge of the program of general scientific sessions. Dr. John H. Musser of New Orleans has been appointed General Chairman of the session, and will be in charge of the program of clinics and demonstrations in the hospitals and medical schools and of the program of round table discussions to be conducted at the headquarters.

A LETTER

Canton, China, June 11, 1938.

A recent Reuter despatch, quoting a Japanese spokesman declared: "Accurate bombing of Canton was carried out despite very heavy anti-aircraft fire."

May we, foreign physicians of Canton and witnesses of the events of the past 14 days, call attention to the "accurate" bombing on June 6. Judging by the results it was aimed chiefly at a large central section of the open city of Canton, between the Electric Light plant and the Taai Ping Road, from east to west and south to north, from the Pearl River to Wai Fuk Road. This district contains a large number of hospitals and doctors' offices—a quiet zone! The accuracy of the airmen's aim is attested by the fact that a bomb struck the Paul Doumer Hospital (French), and destroyed the operating rooms, roentgen ray equipment and laboratory, just as they were prepared to operate upon people who had been bombarded elsewhere. Bombs fell perilously near several other hospitals, shattering glass in same. Are we to assume that the Japanese airmen wish to destroy hospitals in Canton along with other private property?

As physicians, devoted to the saving of human life, we vigorously protest against this determined policy of the Japanese air force ruthlessly to destroy human life.

Signed by: Doctors W. W. Cadbury, C. A. Hayes, R. L. Lancaster, F. Oldt, T. D. Stevenson, J. O. Thomas, P. J. Todd.

WOMAN'S AUXILIARY

Louisiana State Medical Society

President—Mrs. Frederick G. Ellis, Shreveport.

President-elect—Mrs. S. M. Blackshear, New Orleans.

First Vice-President—Mrs. C. A. Martin, Welsh.

Second Vice-President—Mrs. A. G. McHenry, Monroe.

Third Vice-President—Mrs. D. C. McBride, Alexandria.

Fourth Vice-President—Mrs. A. F. Hebert, New Orleans.

Treasurer—Mrs. O. C. Rigby, Shreveport.

Recording Secretary—Mrs. D. T. Milam, Monroe.

Parliamentarian—Mrs. A. A. Herold, Shreveport.

Corresponding Secretary—Mrs. C. B. Erickson, Shreveport.

Press and Publicity—Mrs. R. T. Lucas, Shreveport.

A letter has been received from Dr. Talbot with a message from Dr. O'Hara, President of the State Medical Society, asking us for a very definite service to be rendered to the doctors' organization. This I feel is an honor and we are, of course, delighted to help in any way we can.

The letter in part is as follows:

"At the last meeting of the Executive Committee of the State Society the following recommendation, emanating from the Council, was passed: That the State Society put on a drive to secure

members during 1938, with the slogan 'Every Eligible Doctor in Louisiana a Member of the State Society!' It is my knowledge, also, that the Woman's Auxiliary of the State Society is very desirous of increasing their membership throughout the state. It is perfectly obvious that such activity on your part would tremendously aid and give impetus to the campaign conducted by the State Society. The women can help in so many ways in the various parishes, not only by obtaining the wives of members of the State Society but by influencing the doctors to become members of the Society in order that their wives may be qualified to become members of the Woman's Auxiliary. This offers a valuable opportunity to combine our forces in attempting to increase the membership of both of our organizations, a truly worthwhile project which should receive the loyal support of the members of your Auxiliary."

The doctors are planning district campaigns for membership and you will be notified later as to your part in the work which I know you will perform gladly.

Yours sincerely,
Edna Ellis, President.
(Mrs. Fred G. Ellis).

BOOK REVIEWS

Safe Childbirth: By Kathleen Olga Vaughan, M. D. Baltimore, Wm. Wood, 1937. Pp. 154. Price $3.00.

This work considers as the three essentials for safe childbirth, (1) a round pelvic brim, (2) flexible joints, (3) natural posture. Dr. Vaughan feels that, if these three points are carefully studied, their importance becomes apparent.

As regards the first essential, she has found that the round pelvic brim is the normal type in aboriginal women, living almost or entirely in the savage state, and that in such women the entire pelvic cavity is generally round. The pelvis that is considered normal for the civilized woman is held by her to be really abnormal; she feels that the change in shape from the round type has been brought about by the effects of civilization.

Similarly, the author is of the opinion that the pelvic joints become increasingly flexible as pregnancy advances, and that posture has considerable effect on the mobility of these joints. She contends that the squatting posture so characteristic of savage peoples, as at rest or during defecation, which is normal for them from childhood on, increases the flexibility of the pelvic joints, and thus makes parturition easier. She feels that the sitting posture of civilized women has a contrary effect.

In the third place, the author calls our attention to the fact that in aboriginal peoples delivery usually occurs in the squatting, kneeling, or knee-elbow position. The use of the obstetrical stool or chair is an outgrowth of this custom. She feels that the natural position relaxes the parts to the utmost, and suggests the following method: first, squatting (in the first stage); second, kneeling; third, delivery on all fours (knee-elbow position). The practice of delivering women in the dorsal or left lateral position is condemned as unphysiologic.

The book is an interesting one, and represents a careful review of an enormous amount of clinical, roentgen ray, and other material. If the author's conclusions are granted to be correct, however, the entire system of rearing girls would have to be revised, and our obstetric methods would have to be drastically changed. Whether the round pelvis could be developed in one or two generations, by the use of the suggested methods of rearing children, must be a mooted question. One must conclude then, that while this book is most interesting, there is no likelihood of the adoption of the methods suggested.

E. L. King, M. D.

Clinical Laboratory Diagnosis: By S. A. Levison, M. S., M. D., and Robert P. MacFate, C. H. E., M. D. Philadelphia, Lea & Febiger, 1937. Pp. 877. Price $9.50.

To the authors of this book, we the doctors, medical students and technicians of America owe thanks of gratitude. It is so written that one may use it for reference or laboratory manual. I can appreciate the reviews in anatomy, physiology, or chemistry in connection with the laboratory technic, because it has saved me lots of review work by bringing back to my memory certain connecting links which open up the mental picture of a subject.

No doubt the authors could have concentrated the actual laboratory technic into a much smaller volume. This might raise a question for debate as to whether or not this text is written too much in detail. There could be good arguments on both sides, but Hippocrates once said that "efficiency is obtained only by one who pays strict attention to minute details." The average busy practitioner may lay this book aside for one with more brevity in order to conserve time; but time is always abundant to those who are eager to use it. However, time waits for no man.

For the medical student this book is excellent because of the way subjects are systematized and interwoven with technic. There is a brief description of functional and anatomic results, both normal and abnormal. However, there is still some argument that such abundance of facts may interfere with one's application of essential technic.

For the average technicians, who are unfor-

tunately not all college graduates, this book is not so adapted, for it has been my experience to ask only routine, brief, detail technic from such technicians; otherwise, the test performed by the average technician is application, and the interpretation is perfected by experience. A book such as this might serve to give the technician without a college education a false smattering idea of the "where and what for," because it does not and cannot cover the entire fields in the different branches of science.

I am particularly impressed with the chapters on the function and examination of the alimentary tract, as well as the discussion on liver and biliary diseases. These subjects are very beautifully written without any unnecessary statements and certainly no essential points are omitted.

Generally speaking the drawings, sketches and illustrations are not what one might expect to accompany this wonderful book.

I wish to thank the authors for such a valuable book as this in my library. I sincerely hope my remarks are not suggestive of anything but constructive criticism. I wish, therefore, especially to congratulate the authors for the incorporation in their book of the work on pediatrics legal medicine, and for the adaptability of this book to the general practitioner.

GEORGE BARNES, M. D.

Workbook in Elementary Diagnosis for Teaching Clinical History Recording and Physical Diagnosis: By Logan Clendening, M. D. St. Louis, C. V. Mosby Co., 1938. Pp. 167. Price $1.50.

This is a laboratory manual designed for the purpose of teaching students the art and science of diagnosis. The author has used this method for years in teaching and says it has been of great aid to him. The essential facts in connection with the history and examination are few, and the student is referred to the standard reference books for a fuller discussion. He merely states those data which the student must have readily accessible to gather his information intelligently. There are excellent pen and ink drawings depicting methods of examination and revealing disease processes. Model history and examination forms are presented. Exercises devoted to questions pertaining to physical diagnosis are a feature of the book and to be used by the instructor as a basis for quiz drills.

I. L. ROBBINS, M. D.

Men Past Forty: By A. F. Niemoeller. New York, Harvest House, 1938. Pp. 154. Price $2.00.

This small volume presents the problem of impotence. It is addressed to the lay reader. The subject is considered in all its apsects: etiology, pathology, diagnosis, and treatment. It is rather too complex for the layman's medical background, and somewhat too cursory for the specialist in the field of sexual disorders. Its value is greatest, perhaps, to the "busy practitioner" who has the will, but not the time, to keep abreast of current trends in medicine.

The book contains a list of the available preparations considered by the author as reputable and efficacious in the treatment of impotence. In presenting this to the layman, I believe that a grievous error has been made, since some of the preparations are in the tablet form. Whether it is desirable or not, the layman is quite likely to attempt self-medication after reading the book. As a measure of protection against this tendency, the reader is cautioned that "these (glandular preparations) it is wise to use only under a physician's advice."

IRVING J. GLASSBERG, M. D.

Operative Gynecology: By Harry Sturgeon Crossen, M. D., and Robert James Crossen, M. D. St. Louis, C. V. Mosby Co., 1938. Pp. 1076, Price $12.50.

The fifth edition of "Operative Gynecology," by the Crossens, father and son, is revised to contain the more recent developments. Particular attention is devoted to the choice of operation for individual cases. Numerous illustrations have been added.

The paragraphs dealing with the treatment by roentgen ray and radium are clearly detailed, a feature not common in many on texts gynecology.

As a whole the text is recommended to the young as well as the old students.

ADOLPH JACOBS, M. D.

Hematology: By William Magner, M. D., D. P. H. Philadelphia, P. Blakiston's Son & Co., Inc., 1938. Pp. 395. Price $4.50.

William Magner, pathologist St. Michael's Hospital, Toronto, Canada, and formerly lecturer in pathology, University College, Cork, Ireland, has been one of the outstanding contributors to hematology in the British Empire. He is well known for his hematologic studies and for his experimental and clinical experiences in this particular field. The result of his many years of study of blood diseases and the changes produced in the body by such diseases has eventuated in the production of this book. About it the reviewer has practically nothing but praise. Systematically arranged, written without undue verbiage and beautifully illustrated, the volume is a real addition to the subject of hematology. It is a book which can be used both as a reference book and as one in the library of the ordinary practitioner. The first section will be of more interest to the man in the laboratory than the latter part of the volume. For the practicing doctor this last section is splendid. There is a clear-cut picture painted of all the various types of anemias and blood dyscrasias. The author shows not only how the disease may be

recognized but also, and this is particularly necessary for the practitioner, includes a thorough, detailed discourse on the treatment of the blood diseases.

The above account may seem too fulsome in its praise. A few words of criticism may not be amiss. It is a great pity that more stress than there is is not laid upon the information which may be obtained by the simple procedure of centrifuging the blood and determining the number of c.c. of packed cells in the centrifuge tube. The indices that are obtained by this method are of extremely practical value yet only little more than a page and a half is devoted to this phase of hematologic investigation and practically nothing is mentioned in the discussion of diseases of the results obtained by this method. Particularly is it to be regretted that the simplest and easiest way of estimating changes in the size of cells is neglected, namely the determination of the mean corpuscular volume. Another criticism which is of minor import is that in a book of this type more complete references might well have been incorporated. The name of the author and the journal in which the article is published are given, but it would have added something to the book if there were added, in the references given, the title of the papers and if the references were divided into sections corresponding to appropriate chapters.

J. H. Musser, M. D.

The Negro's Struggle for Survival: By S. J. Holmes. Berkeley, Calif., University of California Press, 1937. Pp. 296. Price $3.00.

As the author properly puts it, this is "A Study in Human Ecology." The study deals with the conclusions based on the investigation of growth of the negro population and its migrations, with its biologic effects on the race. The selective action of disease, infant mortality and birth rate are considered in the light of statistical data, and the conclusions drawn are in the true spirit of scientific detachment. The questions of "The Stabilized Rate of Natural Increase Among the Negro Population" (Chapter 3) and "Will the Whites Absorb the Blacks?" (Chapter 8) are but two of many arresting, interesting and important tasks that the author has assigned himself and executed in a masterly manner. To those of us who live in the South, and especially those interested in the medical, social and economic problem of the negro, the book will prove to be an excellent source of material. The statistical data are so arranged as to afford no hardship in reading the book. A fine bibliography and index add to a well written and pointed book.

I. L. Robbins, M. D.

Pneumonia and Serum Therapy: By Frederick T. Lord and Roderick Hefron. New York, Commonwealth Fund, 1938. Pp. 148. Price $1.00.

This small volume is a revision of "Lobar Pneumonia and Serum Therapy" which first appeared in 1936 as a result of the five-year study initiated in 1931 by Dr. George H. Bigelow of the Commonwealth Fund. In ten clear and concise chapters the full clinical implications of serum therapy are given, and there is adequate discussion of the selection of proper cases for serum therapy, the indications and contraindications for specific treatment, the identification of the type of pneumococcus causing the pneumonia, and detailed description of the mode of administration of the serum with due attention to the precautions to be observed and the treatment of the untoward effects. The results of serum treatment are summarized in the concluding chapter.

It is no longer necessary to argue the value of serum therapy for certain types of pneumonia; its efficacy has been proved beyond question. The large literature which has accumulated during the years of use of specific sera has lead to confusion in the minds of those who are not constantly affected by the pneumonia problem. The authors have therefore rendered practitioners in general a great service in presenting for them the most authoritative plan of treatment, placing the greatest emphasis at all times on the "practical" considerations and avoiding ambiguity of statement. The liberal inclusion of charts and diagrams makes intrepretation of the text clearer and more vivid.

This book is recommended unhesitatingly for any practitioner who wishes either quick reference or more leisurely reading.

Sydney Jacobs, M. D.

Text Book of Ophthalmology: By Sanford Gifford, M. A., M. D., F. A. C. S. Philadelphia, W. B. Saunders Co., 1938. Pp. 492. Price $4.00.

Ophthalmology is indebted to the author for one of the best small text books in our specialty which has ever been written in this country. Although it is primarily intended for the beginner, being a small volume of about five hundred pages, the most experienced may read it and learn. The material is well selected and organized. The illustrations are ample and the table of contents complete. It is more readable than the average text book because the author has put into it some of himself. His broad knowledge and pleasant personality show themselves between the lines.

In subsequent editions which probably will follow shortly, the following suggestions occur to me. The classification used by the Commonwealth Foundation would help especially the beginner in creating a skeleton around which to clothe his future knowledge. The chapter on refraction

could be made more practical and useful. Some of the illustrations are not sufficiently illustrative.

Many roads lead to Rome and we all think our road is the best; and for us, it probably is. Minor differences of opinion do not alter my admiration for this outstanding book. I have said and written during the past ten years that the most frequent form of subacute and chronic conjunctivitis is essentially seborrheic; the author believes that the diplobacillus is the causative organism. Perhaps we are both right in that climatic and other differences may explain an apparent discrepancy.

It is obviously impossible to detail even the outstanding ideas in a textbook of this sort which must be read and re-read for proper evaluation.

In conclusion, I congratulate Dr. Gifford on what promises to be the most popular text book in ophthalmology within the next five or ten years.

CHARLES A. BAHN, M. D.

A Manual of Tuberculosis For Nurses and Public Health Workers: By E. Ashworth Underwood. Baltimore, William Wood and Company, 1938. Pp. 404. Price $3.25.

Interest in tuberculosis control has increased of late, and the public health aspects have been stressed accordingly; yet there has been comparatively little attention paid to preparation of books designed especially for nurses in this field. It is astonishing that there is no recent American work describing the disease in terms intelligible to the student nurse and at the same time detailing the bedside care of the tuberculous patient.

This deficiency is met by "A Manual of Tuberculosis." Dr. Underwood has chosen his material with care and has provided a work which will be of great assistance to the student or to the graduate nurse. Throughout the text, clinical implications have been stressed, and clinical concepts have been reduced to the simplest of terms. A glossary at the end of the book makes this even more efficient. The portions pertaining to concepts in pathology and immunology have been written in an interestingly concise manner. The involvement of the various special systems is adequately treated. The bedside attention to the patient is stressed, and such details as care of the hair and care of the skin are described more fully than in most American texts.

As a basic text for use in teaching tuberculosis to nurses, this book is unhesitatingly accepted.

SYDNEY JACOBS, M. D.

PUBLICATIONS RECEIVED

F. A. Davis Company, Philadelphia: Injection Treatment of Varicose Veins and Hemorrhoids, by H. O. McPheeters, M. D., F. A. C. S., and James Kerr Anderson, M. D., F. A. C. S. Materia Medica by Oscar W. Bethea, M. D., Ph. G., Ph. M., F. C. S., F. A. C. P.

Paul B. Hoeber, Inc., New York City: Industrial Surgery by Willis W. Lasher, M. D., F. A. C. S.

Lea & Febiger, Philadelphia: Cause and Prevention of Disease by William Harvey Perkins, M. D. Practical Otology, Rhinology and Laryngology by Adam Edward Schlanser, M. D.

J. B. Lippincott Company, Philadelphia: The New International Clinics, Vol. II, June, 1938, edited by George M. Piersol, M. D.

The Macmillan Company, New York City: Alcohol: One Man's Meat by Edward A. Strecker, A. M., M. D., Sc. D., and Francis T. Chambers, Jr.

Medical Success Press, Youngstown, Ohio: The Romance of Proctology by Charles Elton Blanchard, M. D.

C. V. Mosby Company, St. Louis: Synopsis of the Diagnosis of the Acute Surgical Diseases of the Abdomen by John A. Hardy, B. Sc., M. D., F. A. C. S.

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